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Fifth annual progress report of the Board of Auditors on the implementation of the United Nations enterprise resource planning system

Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly a letter dated 30 June 2016 from the Chair of the Board of Auditors transmitting the report of the Board on the progress in the implementation of the enterprise resource planning system (Umoja).

* A/71/150.

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Letter of transmittal

Letter dated 30 June 2016 from the Chair of the Board of Auditors addressed to the President of the General Assembly

I have the honour to transmit to you the fifth report of the Board of Auditors on the implementation of the enterprise resource planning system.

(*Signed*) Mussa Juma **Assad**
Controller and Auditor-General of the United Republic of Tanzania
Chair of the United Nations Board of Auditors

Enterprise resource planning system (Umoja): key facts

Cost

$439.4 million	Approved budget to end of 2017
$374.1 million	Expenditure to 31 December 2015 (97 per cent of approved $385.1 million budget to that date)
$30 million to $50 million	Published estimated annual cost of supporting Umoja

Timeline

December 2008	General Assembly approves project proposal
November 2013	Deployment of Umoja Foundation to peacekeeping operations
March 2014	Deployment of Umoja Foundation to 17 special political missions
June and November 2015	Deployment of Umoja Integration (Foundation and Extension 1) across United Nations Secretariat
September 2016	Revised deployment date for cluster 5 (from April 2016)
December 2019	Forecast date for full implementation

Benefits

$140 million to $220 million	Benefits to be gained by 2019

Fifth annual progress report of the Board of Auditors on the implementation of the United Nations enterprise resource planning system

Summary

1. In July 2006, by its resolution 60/283, the General Assembly endorsed the Secretary-General's proposal to implement an enterprise resource planning system across the United Nations Secretariat to replace ageing legacy systems such as the Integrated Management Information System (IMIS). Umoja is central to the modernization of the business administration of the United Nations.

2. In a series of reports since 2012 (A/67/164, A/68/151, A/69/158 and A/70/158), the Board of Auditors has recommended significant changes and improvements to the management and governance of Umoja. The Administration responded positively to many of those recommendations, but made only limited progress in other key areas concerning broader business transformation issues. In particular, the Board has emphasized the need to confirm the adequacy of training, to develop detailed and costed plans for mainstreaming Umoja, to adopt a consistent approach to benefits realization and to ensure that business units have the skills and resources required to implement new ways of working successfully.

3. The original timeline and budget approved in 2008 envisaged deploying Umoja by the end of 2012 at a cost of $248.3 million. However, implementation plans have been substantially revised on several occasions and deployment of full functionality is now not expected until 2019. The current approved budget for the project up to the end of 2017 is $439.4 million.

4. Umoja is being implemented in different parts of the Organization (clusters), with functionality split into three phases:

(a) **Foundation.** This functionality, mainly finance and procurement processes, was fully deployed across peacekeeping operations from November 2013, in special political missions from March 2014 and across remaining United Nations Secretariat entities in two clusters from June and November 2015.

(b) **Extension 1.** Comprising mainly payroll and human resources management processes, including travel, this functionality was deployed across Secretariat entities and peacekeeping operations in two clusters from June and November 2015. Most non-peacekeeping Secretariat entities therefore received Umoja Foundation and Extension 1 functionality at the same time (known as "Umoja Integration").

(c) **Extension 2.** This functionality will include key business processes such as: budget formulation; force planning and programme management; supply chain planning; and conference and event management, and is currently due to be deployed by the end of 2019. The major portion of financial benefits from Umoja is expected to accrue from the deployment of Extension 2.

5. This is the Board's fifth annual review of progress on the implementation of Umoja. It covers: progress in deploying Umoja; stabilizing the Umoja solution; delivering the remaining Umoja functionality; supporting the Umoja solution; and the costs and benefits of Umoja.

Key findings

Deploying Umoja

6. **Umoja Integration (Foundation and Extension 1 functionality) has now been deployed to four clusters with over 33,000 users globally, including nearly 17,500 employee self-service users.** The attainment of global deployment is a major achievement which has introduced a step change in technology and offers a platform to support wider business transformation initiatives, such as the Global Service Delivery Model. Improved readiness assessment procedures identified a small number of risks to successful implementation, but the Administration decided that delaying the deployment of clusters 3 and 4 presented even greater risks. A post-deployment survey of cluster 3 users subsequently identified that 47 per cent of those surveyed strongly disagreed or were not satisfied that they were ready to go live on 1 June 2015. In a pre-deployment survey for cluster 4, where the same question was asked, 49 per cent of users considered themselves unprepared.

7. **Training needs have not been assessed with any rigour and users were inadequately trained prior to the deployment of Umoja.** The Board highlighted previously the serious implications of providing insufficiently high-quality training, namely, that users could (a) make mistakes, (b) raise a high volume of queries, or (c) create workarounds outside of the solution. A review of issues currently identified by users suggests all three of those scenarios appear likely. The Administration has modified the approach to Umoja training over the life of the project. In 2014, it introduced a revised strategy estimated to cost $26 million (including the establishment of the Umoja Academy) for the training not only of users but also of managers and process experts. The number of training events planned had not been achieved prior to go-live, with an average completion rate by location of 53 per cent. At the time of audit, the Administration knew how many training events had been held (over 256,000) but could not provide detailed information as to whether individual users had received all the training required to carry out their roles. The Administration has since informed the Board that it has now developed business intelligence reports to produce detailed training statistics.

Stabilizing Umoja

8. **Although problems with Umoja were expected, and mitigations were put in place, the scale of problems reported in 2015 exceeded the capacity of the support network and the Umoja team to respond.** The global support network resolved 64 per cent of the problems at the first tier, which was a significant improvement compared with the 10 per cent resolution rate for earlier deployments, but the Umoja project team struggled to address the volume of technical support issues. By March 2016, all of the Umoja team's software business analysis capacity (64 staff) was dedicated to post-deployment support. An additional 14 consultants were contracted to provide temporary assistance, but a shortfall of business analysis skills in key areas, including financial accounting, funds management, travel and payroll, hampered the Administration's ability to understand and resolve problems promptly.

9. **Although Umoja operations are stable in many areas, a number of severe difficulties were encountered on implementation as users struggled to cope with the requirements of the new system.** More than 400 issues were reported by clusters 3 and 4, of which 284 were current at the time of audit. The post-implementation review task force developed a set of 63 "high-level issues", including high volumes of open items, numerous delayed or blocked payments (over 20,000), large numbers of items held in suspense (for example, 40,000 items relating to travel tickets), the need for highly inefficient manual uploads of data, and the absence of business intelligence reports, including donor reports. User complaints were particularly strong from entities with extensive field operations, some of which reported major disruption of their operations. The Administration informed the Board that, since the audit, a further four high-level issues had been identified and that it now considered 11 of the 67 high-level issues were resolved.

10. **Weaknesses in business reporting functionality were identified as a critical issue by cluster 3 and 4 entities post deployment and there has been limited progress in developing plans to exploit the improved information available in Umoja.** In 2009, the Administration identified the use of consolidated, up-to-date financial and performance information from across the Secretariat as a major benefit of Umoja. The Board recommended previously that the Administration design, communicate and implement a plan within each business area to exploit the improved information, but limited progress has been made. Although there are over 1,000 standard reports on the system, users are unclear what reports are available or which to use. This has led to there being over 400 pending requests for management information and other reports. A major area of concern is the inability of entities to easily generate reports to donors on the use of their funding in 2015. This has resulted in resource-intensive local workarounds, substantial delays in donor reporting and breaches of legal obligations. The Administration hopes to resolve donor reporting issues by October 2016.

Delivering the remaining Umoja functionality

11. **The Administration does not have an up-to-date and fully costed plan to deliver the remaining scope of Umoja which takes into account the need to address other concurrent and competing challenges.** The Administration faces a number of competing demands, including stabilizing and enhancing Umoja functionality for clusters 3 and 4; decommissioning the legacy asset management system (Galileo); implementing International Civil Service Commission changes to service conditions; deploying cluster 5; building and deploying Umoja Extension 2; developing benefits realization plans; and mainstreaming Umoja technical and business support. The Administration continues to be over-reliant on a small number of key staff to address those challenges and they are now under considerable pressure. As at April 2016, the Umoja development team was almost wholly dedicated to fixing cluster 3 and 4 issues, and deployment of cluster 5 had slipped by five months to September 2016. The Administration subsequently informed the Board that, as at June 2016, the deployment of cluster 5 had again slipped, to November 2016. The development of Extension 2 functionality has also fallen considerably behind schedule.

12. **The Administration has agreed upon new software requirements arising from changes to staff service conditions.** Following the adoption by the General Assembly in December 2015 of a resolution setting out changes to service conditions and entitlements (resolution 70/244), the Administration worked with other United Nations agencies to develop shared enterprise resource planning system requirements by March 2016. The costs of modifying software are covered by existing contractual arrangements, but the Administration will incur additional costs for the design, testing and deployment of the modified software. These costs have not yet been estimated by the Administration, but are not expected to be met from the Umoja project budget. Having assessed the work involved, the Administration has concluded that it will be unable to deploy the upgraded software in line with the implementation dates mandated by the General Assembly and has proposed an alternative timetable for consideration by Member States. The Administration believes that a phased implementation of the changes will mitigate the risks that may be incurred, and will provide an estimate of the cost of implementing the changes in the eighth progress report of the Secretary General on the enterprise resource planning project (Umoja).

13. **There is increasing engagement with the project on the part of some business units which are taking on accountability for delivering elements of the solution.** Where appropriate, business units have now taken responsibility for delivering elements of the project. For example, the Department of Field Support is leading the deployment of cluster 5. The Umoja team will build the solution, but the relevant Under-Secretary-General or process owner will take responsibility and be accountable for its deployment. This approach will help strengthen the partnerships between the Umoja project team and the business units, and reinforce the ownership of Umoja by business units.

Supporting Umoja

14. **Detailed mainstreaming plans for Umoja have not yet been prepared.** In March 2016, the Office of Information and Communications Technology, the Department of Field Support and the Umoja project team held a three-day retreat to relaunch work on the mainstreaming plan. A series of milestones were agreed upon which focused on transferring technical support of Umoja to the Office of Information and Communications Technology, but did not include any actions required of process owners or heads of business units to mainstream or optimize the solution. Aside from the agreed milestones, there are no detailed plans setting out the costs, staff resources and activities needed to effect the smooth transfer of responsibilities to the Office of Information and Communications Technology. The Administration plans to submit a plan to the General Assembly during the seventy-first session that will focus on the priority areas for mainstreaming.

Umoja costs

15. **The design, build, implementation and stabilization of Umoja Foundation and Extension 1 have consumed most of the project budget. Additional funding is likely to be needed to meet the challenges faced by the project.** At 31 December 2015, expenditure on Umoja was $374.1 million, 97 per cent of the approved budget of $385.1 million. A further $54.3 million was approved in January 2016, increasing the total budget for the project to $439.4 million up to the end of 2017. The Administration initially estimated that $51.6 million would be required in 2016 to

stabilize existing deployments; deploy to cluster 5; prepare to replace Galileo; and deliver the budget formulation elements of Extension 2. However, the impact on the budget of diverting resources to implement changes to staff service conditions, the costs of providing extended support to clusters 3 and 4, and the costs of recovering slippage in developing Umoja Extension 2 functionality have not yet been fully assessed. In addition, no contingency has been allowed for any corrective actions required following deployment of new functionality or Umoja Extension 2.

16. **To contain project costs, funds have been moved between objects of expenditure and some costs relating to Umoja implementation have been passed to departments.** Throughout 2015, funds were redeployed between objects of expenditure to meet unplanned costs. For example, reductions made to budgets for travel and for furniture and equipment released $25.5 million for other purposes. Costs of at least $27.1 million relating to licensing and maintenance and corrective work on Umoja, which were originally included in the project budget, were passed to the Office of Information and Communications Technology and the Department of Field Support. As noted in previous reports, substantial training costs relating to Umoja were also transferred to business units. The ability of departments to continue to absorb such additional costs is unclear and the Administration does not centrally monitor the level of these indirect costs.

17. **Robust estimates of future support and maintenance costs for Umoja have not yet been produced. The total cost of ownership of Umoja over 15 years, including capital and maintenance costs, is unknown, but is likely to exceed $1 billion.** The Administration has not calculated the total cost of acquisition and operating costs of Umoja. Estimates of future support and maintenance costs contained in the previous progress reports of the Secretary-General range from $30 million to $50 million a year. Although a more recent estimate was significantly higher, the Administration has informed the Board that it is unverified and is considered unreliable. On the basis of the previously published estimates, the total cost of ownership of Umoja over the initial 15 years of the vendor licence agreement will most likely exceed $1 billion.

Benefits of Umoja

18. **The Administration remains committed to realizing qualitative and quantitative cumulative benefits in the overall range of $140 million to $220 million by 2019.** The Administration informed the Board that it believes it can generate the expected benefits prior to deploying Extension 2. However, the Administration still does not have an agreed methodology for realizing benefits and the Board was unable to validate the "tangible benefits realized" reported to the Advisory Committee on Administrative and Budgetary Questions in September 2015. Most of the work to realize the benefits is at a very early stage. In its previous reports the Board has been critical of the lack of focus on benefits realization. In particular, the Board has noted: the absence of baselines of pre-Umoja performance; lack of a target operating model to support the new business processes; and failure to train staff in approaches to continuous improvement to solve business problems as they arise. Now that the technical solution has gone live, the Administration has acknowledged that it needs to address those gaps as a matter of urgency.

19. **In the absence of an agreed methodology for realizing benefits, at the time of audit the Administration was seeking to agree upon budget reductions with departments and to pilot an approach to identify benefits within peacekeeping operations.** A budget reduction target of $81.4 million for 2017 in respect of Umoja benefits was agreed centrally and departments were asked to contribute through opportunities arising from frozen posts, abolished posts and non-post reductions. The lack of a performance baseline increases the risk that budget reductions were agreed primarily on the basis of departments' ability to accept them rather than on the basis of a reliable assessment of actual benefits realized. The Administration has since abandoned plans for the pilot exercise to identify benefits in peacekeeping operations in the first quarter of 2016 and is now developing a new methodology using data available from Umoja. In all four of its previous annual reports, the Board has emphasized that Umoja offers the potential for significant qualitative and quantitative service delivery benefits, but that the Administration needs to better plan how it will realize them in each department and office. Overall, the Administration has made very limited progress with regard to the Board's recommendations in this area.

Overall conclusion

20. The implementation of Umoja Integration globally across more than 33,000 staff in 400 locations is a significant achievement given the project's complexity and difficult start. It is common for major enterprise resource planning implementations to experience problems, but the decision to prioritize adherence to the deployment schedule above the need to ensure organizational readiness has increased the scale of problems encountered. The Administration is now struggling to cope with a significant number of implementation issues, alongside other concurrent challenges.

21. Umoja remains central to the successful reform and modernization of the administration of the United Nations and has the potential to generate major benefits for the Organization and for Member States. It is not feasible to return to using legacy systems such as the Integrated Management Information System (IMIS) and business units must now take full ownership of Umoja and work closely and constructively with process owners and the Umoja project team to resolve the current problems and bring about the improvements necessary to optimize the solution. However, the Administration needs to demonstrate that it can control the growing costs of the project and realize the financial and service delivery benefits which were promised, in order to present a viable business case which justifies further investment by Member States. Additional funding will be required to deliver the full scope of the project.

22. To ensure the current problems and wider challenges are addressed in an effective and affordable manner, the Administration should conduct a thorough review of current project plans and priorities in order to develop fully costed options for delivering the remaining scope. The options should be based on a realistic appraisal of the capacity of the project team and business units to stabilize the existing deployments and deliver the remaining scope. The costs and benefits of each option should be clearly presented to enable Member States to take informed decisions on the future direction of the project. It is likely that, in consultation with Member States, the Administration will need to take some difficult decisions and make major revisions to existing plans.

Recommendations

23. The Board recommends that:

(a) The Administration assess the challenges facing the project and develop prioritized and fully costed options to implement the remaining scope of the Umoja solution;

(b) Heads of business units address user training needs as a matter of urgency by: (i) performing a skills needs analysis to identify training requirements for users in each business unit, (ii) developing a costed training plan for delivering the required training, and (iii) maintaining an up-to-date skills matrix, so that appropriate training can be provided as staff leave and new staff join;

(c) The Administration ensure business units are supported in the application of the new methodology developed to identify and realize the benefits from improved ways of working; this should include providing access to skills and capability in operational improvement, and holding business areas to account for delivering the expected benefits;

(d) The Administration calculate the total cost of ownership of Umoja over its proposed operating life;

(e) The Office of Information and Communications Technology and process owners develop detailed mainstreaming plans and seek approval for the required funding at the seventy-first session of the General Assembly.

24. The Administration accepted all the Board's recommendations.

Follow-up of previous recommendations

25. Since the Board first audited the Umoja project in 2012 it has made a total of 38 recommendations. Of the 16 extant recommendations from the Board's previous reports, all of which were accepted by the Administration, 2 have been fully implemented, 8 are under implementation, 5 have not been implemented and 1 has been closed by the Board (see table below). The closed recommendation relates to improving how the Administration embeds more efficient and standardized working practices across the Organization and, while not implemented, has been superseded by a new recommendation in the present report which better addresses the current status of the project.

26. A more detailed commentary on the individual recommendations, together with details of action taken by the Administration is included in annex I.

Status of implementation of previous recommendations

	Fully implemented	*Under implementation*	*Not implemented*	*Closed by the Board*
Total	**2**	**8**	**5**	**1**
Percentage	13	50	31	6

I. Background

1. Umoja is an ambitious global project to modernize a wide range of business processes and systems that are essential to the efficient and effective functioning of the Organization. The solution will span most of the Organization's administrative and support functions, including finance and budget, supply chain and procurement, human resources, central support services, and programme and project management. It is being used in entities and locations beyond the core Secretariat, many of which have differing business models, funding and accountability structures.

2. The project proposal was approved by the General Assembly in December 2008, in resolution 63/262. The high-level aims of Umoja were set out in the first progress report of the Secretary-General (A/64/380) and included: to support management reform and accountability, improve the direction of resources and achieve more efficient and effective working practices through improved systems and processes. The Administration has committed to delivering cumulative financial benefits of between $140 million and $220 million by 2019.

3. The approved project budget up to the end of 2017 is $439.4 million. As at 31 December 2015, the Administration had spent $374.1 million (97 per cent of the approved $385.1 million budget to that date). These reported costs exclude amounts absorbed by business units in preparing for the deployment of Umoja. The Administration expects to complete the deployment of Umoja by the end of 2019.

A. Deployment strategy

4. The Administration originally planned to deploy Umoja across the Secretariat in two phases by the end of 2012. Those plans were significantly revised and current deployment plans are based on phased implementation of parcels of functionality across groups of United Nations entities known as clusters (fig. I). The first two clusters (peacekeeping operations and 17 of 38 special political missions) were implemented in 2013 and 2014, respectively. Cluster 3[1] was deployed in June 2015, followed closely by cluster 4 in November 2015, involving the remaining Secretariat entities. Deployment of cluster 5, related to national staff payroll in peacekeeping operations and special political missions, is now planned for November 2016. Further information on the organizations deploying Umoja can be found in annex II.

5. The Umoja business processes to be implemented have been grouped together in three main functional groupings known as Foundation, Extension 1 and Extension 2, which comprise:

(a) **Foundation**: finance processes (funds management and financial accounting), supply chain, project management, and sales and distribution. Umoja Foundation is essential to supporting International Public Sector Accounting Standards (IPSAS) requirements;

[1] United Nations Office at Nairobi, United Nations Environment Programme, United Nations Human Settlements Programme, Office for the Coordination of Humanitarian Affairs, Economic and Social Commission for Asia and the Pacific, and United Nations Assistance to the Khmer Rouge Trials.

(b) **Extension 1**: human resources management processes such as organizational and position management, personnel administration, entitlements, benefits and time management. Payroll, travel initiation, travel expenses and online booking are also included;

(c) **Extension 2**: other important administrative processes such as budget formulation, force planning, programme management, supply chain planning, warehouse management, conference and event management, full grants management and commercial activities.

6. The simultaneous implementation of business functionality contained in Foundation and Extension 1 is referred to as "Integration" functionality. Further information on the functionalities included in Foundation and Extension 1 can be found in annex III. A number of significant issues have arisen during the implementation of Umoja and cross-functional task forces have been created to lead intensive corrective action. For example, an upgraded version of Extension 1, which addressed the major problems experienced in the integration pilot at the United Nations Stabilization Mission in Haiti (MINUSTAH), was developed in time for deployment to cluster 3.

B. Previous comments by the Board and scope of the report

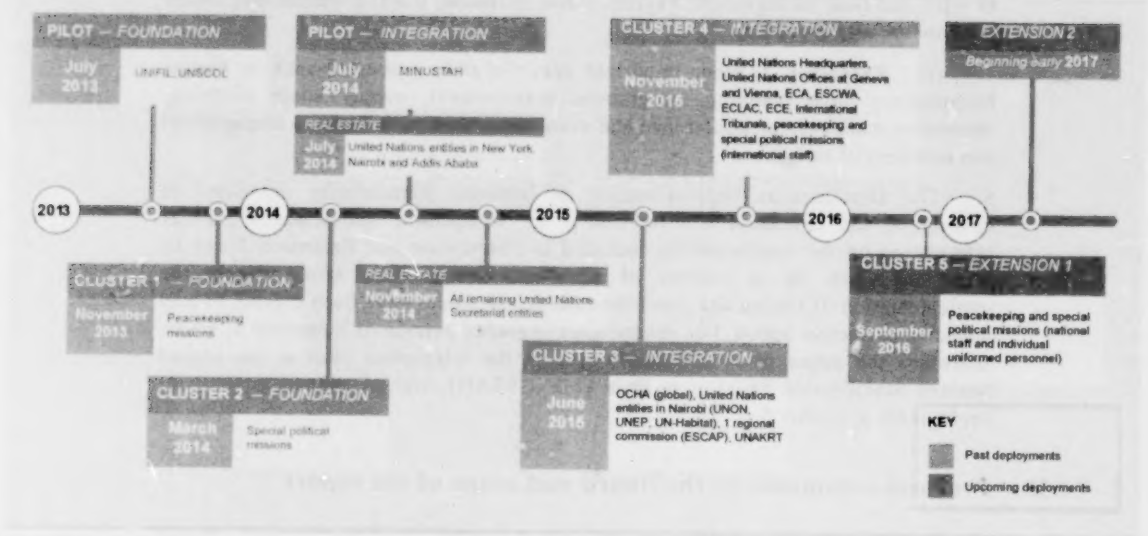
7. In its resolution 66/246, the General Assembly requested that the Board provide annual progress reports on the implementation of the enterprise resource planning project. In its first report (A/67/164), the Board highlighted that it could provide no assurance that the project would be delivered to time and budget and noted that many of the problems pointed to weak project governance and management, as well as to wider and deeper weaknesses in United Nations governance and management of business transformation.

8. By the time of the second progress report (A/68/151), the project was on a sounder footing but the implementation challenges were about to escalate, with the project moving into a phased, multisite implementation process. In particular, the Board noted systemic issues, including the Organization's limited ability to manage change and the ambitious planning assumptions for the project.

9. In its third report (A/69/158), the Board reviewed the progress made by the Administration in deploying Umoja within the Department of Field Support, drew attention to the need to introduce change to the United Nations in a more effective, planned manner and highlighted that achieving business readiness for Umoja had to be a collective responsibility.

10. In its fourth report (A/70/158), the Board identified that, in order to achieve the aggressive implementation timetable for clusters 3 and 4, some key project activities had been curtailed. They included testing routines and data conversion exercises. The weaknesses in preparing staff for the changes Umoja would introduce and gaps in post-implementation support arrangements were identified as further risks to the implementation strategy, and the Administration had not developed adequate contingency plans to mitigate the known risks. The Board identified that significant challenges had been encountered with previous deployments of Umoja owing to a lack of organizational readiness, and there was a high risk that similar problems would emerge in 2015.

Figure I
Current deployment timetable



Umoja Foundation

122 business processes covering: finance (funds management and financial accounting), supply chain (real estate, plant maintenance, logistics execution and procurement), project management, and sales and distribution (third-party procurement services and billing).

Umoja Extension 1

61 business processes covering: organizational and position management, personnel administration, entitlements, benefits, time management, payroll, travel initiation, travel expenses and online booking.

Umoja Integration

Joint deployment of Umoja Foundation and Umoja Extension 1.

Umoja Extension 2

133 business processes covering: budget formulation, force planning, programme management, supply chain planning, warehouse management, conference and event management, full grants management and commercial activities.

Source: Umoja project team.

Notes: The "Integration" deployments in clusters 3 and 4 consist of the functionalities from both Foundation and Extension 1; further information on where Umoja is being deployed is contained in annex II.

Abbreviations: UNIFIL, United Nations Interim Force in Lebanon; UNSCOL, Office of the United Nations Special Coordinator for Lebanon; MINUSTAH, United Nations Stabilization Mission in Haiti; ECA, Economic Commission for Africa; ESCWA, Economic and Social Commission for Western Asia; ECLAC, Economic Commission for Latin America and the Caribbean; ECE, Economic Commission for Europe; OCHA, Office for the Coordination of Humanitarian Affairs; UNON, United Nations Office at Nairobi; UNEP, United Nations Environment Programme; UN-Habitat, United Nations Human Settlements Programme; ESCAP, Economic and Social Commission for Asia and the Pacific; UNAKRT, United Nations Assistance to the Khmer Rouge Trials.

11. The present progress report has been prepared on the basis of audit examinations conducted between December 2015 and April 2016. The examinations included interviews with key officials based at United Nations Headquarters and in New York and at offices away from Headquarters, a review of relevant project documentation held by the Umoja project team and the Secretariat, and visits to project sites.

12. In the present report, the Board focuses on:

(a) **Deploying the Umoja solution**: implementation activities and whether risks were managed;

(b) **Stabilizing the Umoja solution**: the management and technical support offered to users of Umoja after the go-live stage;

(c) **Delivering the remaining Umoja functionality**: plans to deploy Umoja to cluster 5 and progress in developing Umoja Extension 2;

(d) **Supporting the Umoja solution**: the longer-term arrangements to ensure that Umoja remains current;

(e) **Umoja costs**: the cost of deploying the Umoja solution, including the indirect, associated costs incurred in the business process and planned further investments;

(f) **Umoja benefits**: progress in harnessing the current and planned benefits from the deployment of Umoja.

13. The Board continues to coordinate closely with the Office of Internal Oversight Services to use the results of its programme of work on the implementation of the enterprise resource planning system, including its audit of the Foundation and Umoja Extension pilots. The Board notes the continued consistency in findings, and the commonality of perspective, on the issues facing the project.

II. Deploying the Umoja solution

14. In 2015, the Administration deployed Umoja to clusters 3 and 4. Umoja Foundation and Extension 1 have now been deployed across the Secretariat to 33,000 staff in 400 locations. This is a significant achievement given the project's complexity and difficult start. In the present section, the Board examines the Administration's management of the deployment to clusters 3 and 4, including key risks and mitigations.

Organizational readiness for deployment to clusters 3 and 4

15. In its fourth report, the Board reported that the Administration had not been sufficiently prepared to provide support after the deployment to clusters 1 and 2 or the pilot deployment of Umoja Extension 1 in Haiti (MINUSTAH). The Board also identified that the pilot of Extension 1 focused primarily on the viability of the technical solution and provided very limited assurance as to the extent to which new ways of working would be successfully implemented. A significant amount of additional and unplanned work was therefore required of the Umoja team, local staff, the Department of Field Support and contractors to support clusters 1 and 2. The Board raised concerns that such an ad hoc approach might not be viable for clusters 3 and 4, especially given the much larger scale of the deployments in terms of user numbers.

16. At its seventieth session, the General Assembly adopted resolution 70/248, in which it requested the Secretary-General, in the further roll-out plan for the implementation of Umoja, to conduct an objective assessment of the organizational readiness for business change. To support that assessment, the Administration increased the level of business accountability for business readiness by

implementing the recommendation the Board made in its third progress report (A/69/158) that heads of business units, the process owners and the project team each provide positive confirmation to the management committee that all enablers necessary for a successful roll-out are in place. Heads of business for each unit/entity involved in each cluster implementation (30 entities for cluster 4) were required to report readiness to the management committee. In addition, Umoja produced and presented to the Secretary-General on the first day of each month a high-level scorecard which presented a high-level assessment of each main cluster entity.

17. The introduction of revised readiness assessments improved the identification and reporting of risks to senior management prior to deployment to clusters 3 and 4. The decision to deploy was dependent on those entities passing a series of key "quality gate" milestones to gauge predeployment readiness. At the time the decision was taken to proceed with deployments to clusters 3 and 4, there were known failures and risks in key areas of the organizational readiness assessments, including:

- **Inadequate numbers of users had been trained, with the likelihood of this having a consequential impact on support capacity.** An inadequate number of users, including those in support roles, had been trained by the time of deployment; an average of 53 per cent of planned training had been completed. The steering committee minutes for 24 July 2015 record that for the cluster 3 roll-out in Nairobi some 60 per cent of user access mapping was incorrect and training was therefore also incorrect. For cluster 4 in New York, owing to the limited time available for corrective action, the Administration identified the minimum number of staff it needed to train in each role and provided training on that basis.

- **Data readiness against the requirement for financial accounting data conversion was not fully complete and validated.** Cluster 4 entities had insufficient time to complete and validate the financial accounting and some related data conversions. Cluster 3 entities also had financial data issues, with trial balances containing errors and defects.

- **Application readiness.** As noted in the Board's previous report, testing of some processes for cluster 3 entities had been curtailed, even though defects had been identified across entitlements, human resources and services delivery processing.

18. Those readiness issues were also encountered in earlier Umoja deployments. For example, the need for more training of users was a key issue following Foundation deployment in clusters 1 and 2 entities, while local process experts to support deployment were not trained in advance of the pilot roll-out of Extension 1 in Haiti. Although it was aware of those problems with previous deployments, in September 2014 the Administration chose to condense the timetable for preparing for cluster 4 deployment from seven to five months to meet its November 2015 target date, including by reducing the number of test events.

19. In its previous report, the Board raised concerns that there would be significant risks to the timing and quality of cluster 4 deployment as a result of that shortened timetable. However, the Administration considered that the risks and potential costs of delaying the deployments outweighed the risks of proceeding, and therefore went ahead with the deployments.

Umoja training

20. Training users to perform the new end-to-end business processes is fundamental to successful operation of the Umoja solution. Since 2012, the Board has commented extensively on deficiencies in the Administration's various approaches to providing training, and has made a number of recommendations intended to improve the chance of business units successfully adopting the solution. Some recommendations are yet to be implemented, including that:

(a) The Administration clearly set out how it will manage change and embed more efficient and standardized working practices across the Organization; and develop plans for how staff will be supported to develop the skills, capacity and capability to adopt different working practices (A/67/164, para. 31);

(b) The Office of Human Resources Management confirm that the current training budget will fund the appropriate level of training for the required number of staff (A/68/151, para. 44).

(c) The Administration ensure that heads of business units have the resources and skills required to implement the standard business processes and new ways of working successfully (A/69/158, summary, para. 29 (d)).

21. The Administration has revised its approach to providing training, and the funding required, throughout the life of the project. For example, the original estimate of training costs in April 2008 was $37 million for a programme of instructor-led training. In September 2011, at a time when the project was under financial pressure, this was changed to a train-the-trainer approach, resulting in a reduced training budget of $7.4 million (some 2 per cent of the overall project budget at that time).

22. In 2014, the Administration requested additional funds to deliver a revised training strategy, which included the Umoja Academy (A/69/385, paras. 51-52). The request was made after insufficient investment in training was identified as a key contributing factor to the significant issues experienced following the roll-out of Umoja Foundation in peacekeeping missions (cluster 2). The new strategy was intended to train not only users but also managers and process experts, at an increased cost of $26 million until the end of 2015.

23. The situation following the roll-out in clusters 3 and 4 suggests the approach to providing training needs to be revisited once again. The Administration does not know how many users have been trained in the appropriate Umoja processes for their roles. Entities reported that there were insufficient numbers of trained users prior to cluster 4 deployment, with about 53 per cent of staff completing training on average. The Administration continues to provide training to users as part of its post-implementation support. However, training plans are not based on a thorough needs assessment. This is because the Administration does not track the number of users that have been trained to work in the roles they are currently assigned.

24. The Administration also continues to be handicapped by insufficient numbers of trained staff to support Umoja users. In the Secretary-General's seventh report, the Administration reported that 7.5 per cent of the total users (11,800) as at August 2015 had been trained as local process experts to provide local support. This was within the target of 5 to 10 per cent of total users. However, the number of local process experts has not been increased following the deployment to cluster 4 and the

significant increase in the number of staff using the system is having a substantial effect on the levels of support requests (see sect. III below). Again, the Administration currently does not have the ability to readily report on the number of users trained, although it is developing a Business Intelligence solution to produce such reports by September 2016.

25. The Board highlighted previously the serious implications of providing insufficiently high-quality training, namely, that users could (a) make mistakes, (b) raise a high level of queries or (c) create workarounds outside of the solution (A/69/158, table 2). A review of issues currently identified by users suggests all three of those scenarios appear likely. In addition, without a thorough needs analysis in each business unit there is a risk that scarce resources set aside for training are being used to train the wrong staff.

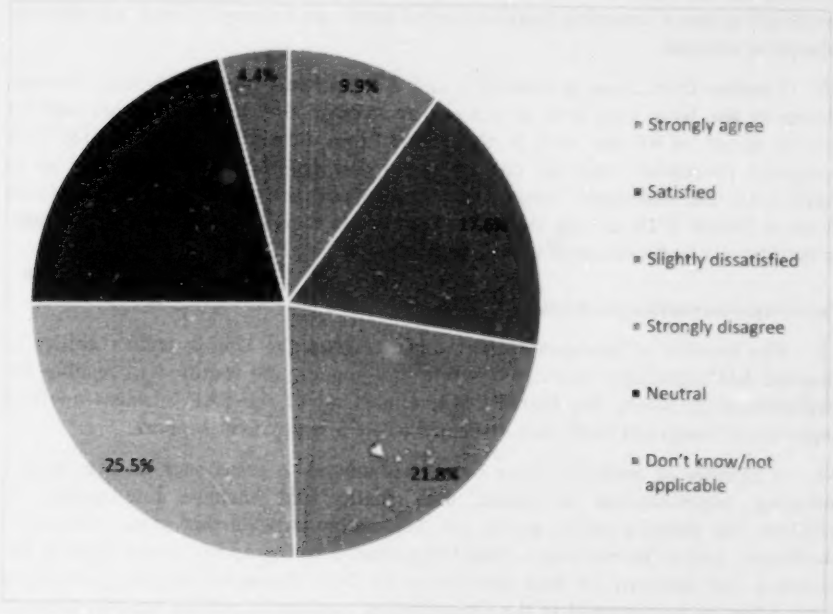
Preparing staff to adopt new ways of working

26. The impacts of the changes to be introduced by Umoja were not systematically evaluated by the business units. Some ways of working under Umoja are very different from the procedures staff have been used to in the past. Human resources self-service functionality, for example updating annual leave records, was not widespread in the United Nations Secretariat. The reduction of the number of review and approval steps in some business processes changed the roles of some individuals dramatically, especially in areas where multiple layers of approval had been the norm. The workload of certifying officers increased in some areas and the involvement of budget sections diminished significantly in some areas where line managers play a more direct role in approving charges to the budget.

27. Managing such changes and deriving full benefit from them require an understanding of the main areas of change as well as the preparation of users for those changes, including introducing new organizational structures, training courses and procedural instructions where appropriate. Achieving business readiness is a collective responsibility and there remains a need for heads of business units and process owners to work with the project team to ensure that all enabling actions necessary for Umoja to be used effectively and efficiently are in place.

28. A post-deployment survey of cluster 3 users identified that 47 per cent of those surveyed strongly disagreed or were not satisfied that they were ready to go live on 1 June 2015 (fig. II). In a predeployment survey for cluster 4, where the same question was asked, 49 per cent of users surveyed considered themselves unprepared.

Figure II
Cluster 3: percentage of users who felt ready to go live



Source: Umoja team post-go live survey of cluster 3 Umoja users.
Note: Surveys assessed the effectiveness and perception of Umoja training, support, communications and the overall Umoja experience. With respect to the cluster 3 survey, 17 per cent of Umoja users (1,133 out of 6,500) responded.

III. Stabilizing the Umoja solution

29. In the present section, the Board examines the post-implementation support arrangements in place to resolve the problems reported with Umoja, and the Administration's capacity to manage these demands.

Post-deployment support

30. In its fourth report, the Board noted that the Administration was building capacity for cluster 4 entities for local support through information and communications technology (ICT) and local process experts. It was also increasing capacity at the regional service centres in Brindisi, Italy, and Valencia, Spain, to 50 Umoja ICT and process experts, and preparing for the "mainstreaming" of global support operations to the Office of Information and Communications Technology.

31. To mitigate the known risks around deployment, the Administration directed additional resources into post-implementation support. A tiered approach with dedicated input from process experts and functional areas was established, with hubs in Geneva, Nairobi and New York. A full-time senior deployment coordinator was appointed for New York. At other sites, the Administration appointed part-time deployment coordinators, supported by small project teams in Geneva and Nairobi,

to prepare and support local implementations. Teams representing process owners, business areas and the Umoja project team provided training and capability assessments for staff as well as a "walk-in" support service for users. Initiatives employed to solve recurring issues included hands-on training, clinics and informal education sessions.

32. Demand from users in clusters 3 and 4 for support was higher than forecast. However, the hubs were able to achieve an average first level resolution rate for Umoja issues of 64 per cent in the period from July to December 2015. This compared favourably with the rate of 10 per cent in previous deployments up to April 2015. The dedicated Umoja production support team in New York was scaled down in March 2016 and the staff were returned to their original posts, but a walk-in facility with reduced capacity was kept in place.

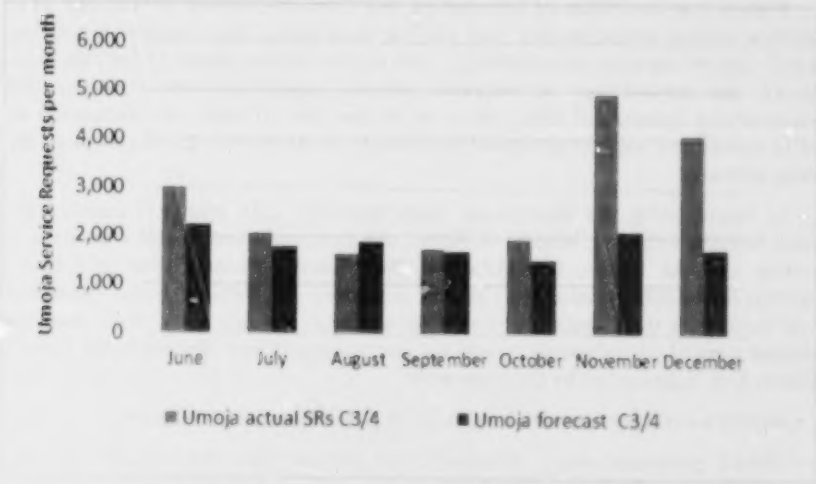
Post-implementation problems

33. The number of problems reported outweighed the Umoja team's ability to respond and significant corrective action and support are required to resolve the implementation issues. By March 2016, almost all of the SAP business analysis capacity of Umoja (64 staff) was dedicated to post-deployment support.

34. A number of problems have been encountered in areas such as user access mapping, organizational structures, data quality and business intelligence. In addition, the Board's audits across the Secretariat indicate that some substantial challenges need to be overcome if the Organization is to properly assure itself of the accuracy and integrity of data underlying its 2015 financial records. Correcting these issues is fundamental to the Organization's ability to realize benefits through the release or redeployment of staff and the use of improved management information to inform improved decision-making.

35. In April 2015, the Umoja team produced a forecast of problems expected and the capacity required to address them in anticipation of the planned cluster 3 and 4 deployments. By the time of implementation of the cluster 4 deployment at the end of 2015, the volume of support requests exceeded the forecast by a considerable margin (fig. III). A backlog of unresolved tickets accumulated and in November 2015 the Steering Committee was informed that tier 1 had resolved 70 per cent of cluster 4 tickets raised, but tier 2b (process owners) had only resolved 91 of 516 tickets assigned to them.

Figure III
Forecast and actual Umoja service requests for clusters 3 and 4 between June and December 2015



Source: Unite Service Desk statistics March 2016 and Umoja project forecast April 2015.

36. In February 2016, the Umoja team and the Office of Information and Communications Technology identified that Umoja process and operational experts were not completing work orders in a timely manner and that a lack of resources had resulted in additional work being assigned to the Umoja team. It was also noted that service-level agreements were not fully defined for each tier of support and compliance with them was not monitored.

37. At the time of the Board's audit in April 2016, Umoja and the Office of Information and Communications Technology were seeking to identify ways in which to improve the tiered support structure, implement lessons learned from cluster 3 and 4 implementations, and prepare for the Office of Information and Communications Technology to deliver full support through the "Unite" service desks. Proposed actions had not been agreed upon at the time of audit. The Administration informed the Board that, as at June 2016, progress had been made, with a number of initiatives having been implemented to improve the tiered support structure.

38. Additional temporary capacity of 14 external consultants had been contracted, but there remained a shortfall of business analysis capability in key areas, including financial accounting, funds management, travel and payroll. That shortfall of capability increases the risk of:

(a) Additional cost/spend on the consultancy work to cover unplanned additional support needs and "backfill" the Umoja development team;

(b) Delays in the start of work on cluster 5, Galileo decommissioning and implementation of changes to staff service conditions;

(c) Negative effects on business operations while issues remain unresolved, a consequential loss of confidence in the Umoja solution and the generation of workarounds in the business units.

39. Umoja and the Office of Information and Communications Technology have identified several initiatives that may resolve these risks. They include: increasing internal support capacity and capability; revising the support model to provide more help on the ground and at regional centres; improving user training; and mainstreaming operational tasks. However, at the time of audit, the dedication of staff to operational support presented an obstacle to any further development of the Umoja solution.

40. In March 2016, the deployment leads from the main cluster 3 entities (the United Nations Office at Nairobi (UNON), the Economic and Social Commission for Asia and the Pacific (ESCAP) and the United Nations Office at Geneva (UNOG)) organized a workshop to review more than 400 detailed issues submitted by all entities to the Umoja post-implementation review taskforce. Their analysis produced a set of 63 recommendations for improvements and changes to the Umoja solution. Key issues noted by the team were:

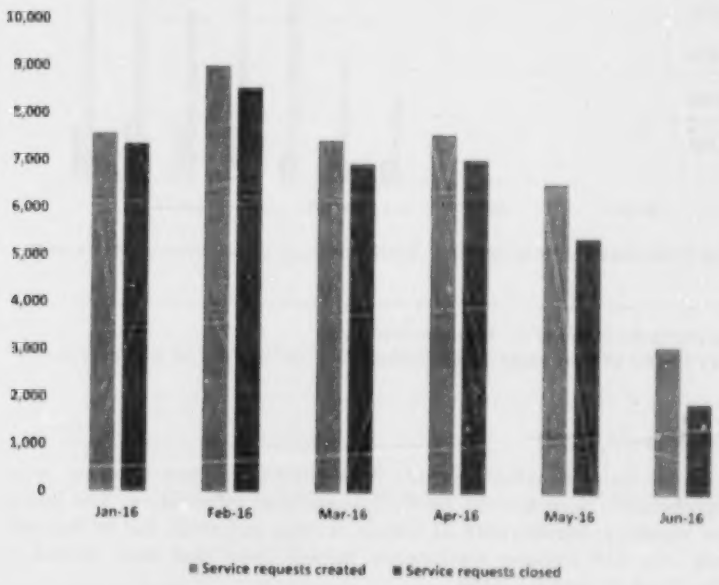
- 40,000 travel requests with a value of $9.4 million were in suspense
- 20,000 payments were "blocked", i.e. put on hold for various reasons, including insufficiency of funds
- Non-United States dollar transactions reported by the United Nations Development Programme were "parked" for manual intervention before it was possible to process them in Umoja
- Of 248 service requests raised at levels 2 and 3, 125 had been pending for over 30 days
- Cash control reports were not available, so budget holders were unable to check if funds were available before paying travel requests
- Processes for organizing travel to conferences were over-complex and causing urgent concerns for event organizers and attendees
- There was no functionality in Umoja to merge Integrated Management Information System (IMIS) data with Umoja data (for example, to prepare a donor report) and this undermined the Administration's ability to produce meaningful management information reports

41. The list of issues was grouped into categories to help assess which area of support should take up each recommendation. As a result of the assessment, it was concluded that 49 per cent of the recommendations required systems and reporting enhancements, and 51 per cent required interventions from the business units to change processes, policies and documentation. At the time of audit, the Administration had not assessed the time it would take to resolve those issues, nor the budget implications. The Administration has since informed the Board that over 73 per cent of the 248 service requests raised at levels 2 and 3 have been addressed and closed.

42. Further information provided by the Administration confirms that a steady stream of service requests was received over the period from January to June 2016. On average, approximately 7,500 service requests were received each month up to

15 June 2016. Of the 41,358 service requests received, 37,296 had been cleared and a further 1,170 were considered cleared pending confirmation. This left 2,892 work orders in progress. The data provided indicate that, on average, those work orders had been open for 47 days. The continued reporting of significant numbers of service requests indicates that users still require considerable support to use Umoja effectively. Figure IV shows the number of service requests created and closed between January and 15 June 2016.

Figure IV
Numbers of service requests created and closed, January to 15 June 2016



Source: Analysis by the Board of the Administration's data.

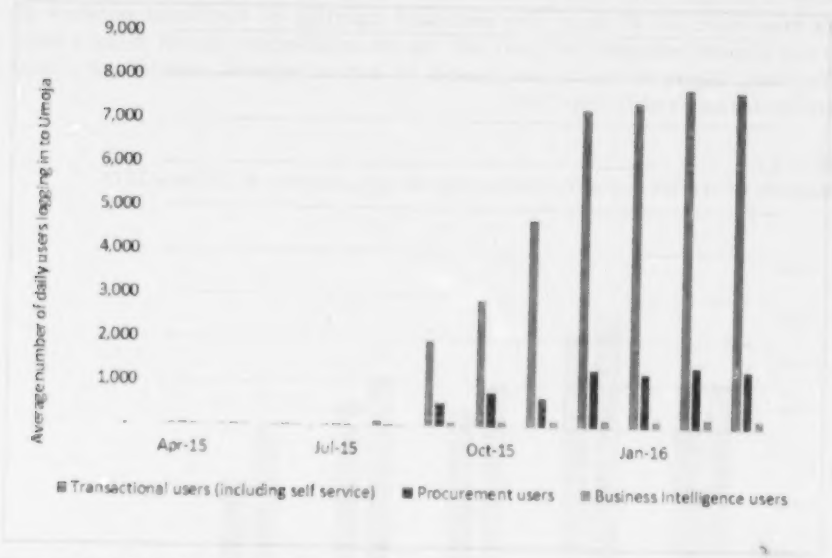
Number of Umoja users

43. The number of staff logging into Umoja has continued to increase as the system has been deployed in more locations. However, the increased number of registered users has not yet translated into an increased number of regular users. Prior to cluster 3 roll-out, an average of 20 to 30 users were logging into Umoja each day. At the end of March 2016, nearly 8,000 users were logging in each day (fig. V). However, this is far fewer than the 33,000 registered users set up in Umoja.

44. The Office of Internal Oversight Services reported that, in November 2015, in the three Nairobi entities[2] about 10 per cent of users set up had not logged in during the previous 90 days. The Administration's cluster 4 post-deployment survey also found that just over a third of respondents used Umoja a few times a month or less.

[2] UNEP, UN-Habitat and UNON.

Figure V
Average number of users logging into Umoja each day between April 2015 and March 2016



Source: Analysis by the Board of the Administration's data.
Note: Average number of users based on the number of log-ins recorded for weekdays in each month.

Business intelligence reports

45. One of the major benefits expected from Umoja was that it would provide more comprehensive, accurate and timely management information. The business intelligence reporting functionality of Umoja is very powerful, but at the end of March 2016 only 230 business intelligence "power users" had been trained, less than half the planned number of 500.

46. The development and use of business intelligence reporting was in its infancy at the time of audit. As at December 2015, there were 1,006 reports available in Umoja. Existing reports cover areas such as accounts receivable, accounts payable, time management and fixed assets. However, poor data quality in some areas undermines the usefulness of some reports. As a short-term measure, the Organization is replicating reports that it previously ran on IMIS. To avoid Umoja being used simply as a very costly replacement for IMIS, it is important that the full business intelligence and reporting capabilities of the system add value and are utilized in a planned and effective manner to support decision-making by management and stakeholders.

47. Weaknesses in the business reporting functionality was a critical issue identified by cluster 3 and 4 entities post deployment. Reasons for this include:

- Umoja cannot produce the reports that entities require. For example, although details of more than 18,000 grants have been loaded into Umoja, there is currently no functionality in Umoja that brings in data from other systems, particularly IMIS, to enable entities to generate reports to donors on the use of

their funding. Entities have developed resource-intensive local workarounds, which is causing substantial delays in donor reporting, and breach of legal obligations. The Administration hopes to resolve donor reporting issues by October 2016.

- Users are not clear what reports are available or which to use. Notwithstanding issues around data quality, there are over 1,000 standard reports available in Umoja, but there has been little communication and guidance on how to generate these reports and who can access them. The Umoja team does not monitor which reports are commonly used but, together with business units, it identified what were considered to be the most useful reports in February 2016. This should form a starting point for providing greater clarity to report users across the business units.

- The Administration has yet to develop clear governance structures and processes for identifying, developing and sharing reports. Users are therefore unclear as to who is responsible, which had led to there being at least 400 pending requests for management information and other reports at the time of audit.

48. The Administration recognizes the importance of addressing those issues and has included the need for a comprehensive plan to define reporting, access, data configuration, the release of reports and training, as one of the Administration's 11 urgent recommendations coming out of the post-implementation taskforce for cluster 3. The Administration plans to resolve the issues during the summer of 2016, as part of its approach to mainstreaming. The Umoja team will be responsible for developing infrastructure and managing data so that users within the business units can be responsible for creating the reports they need. Business intelligence "power users" are already starting to develop reports, but the Administration recognizes that the lack of resources is a significant risk to delivering the required reports.

49. The lack of reporting functionality and the skills required to support analysis of such reports is impairing departments' ability to understand organizational performance and realize benefits. In its report on progress in the handling of information and communications technology affairs in the Secretariat (A/70/581), the Board identified that realizing the benefits of the improved management information would require staff to interrogate complex datasets and distil them into clear information on the basis of which management could make decisions. It would also require a comprehensive plan at all levels of the United Nations to provide assurance that aggregate datasets were built on accurate data at the transactional level. As the Board noted in that report, limited progress has been made in developing such a plan.

50. The Administration has informed the Board that as at June 2016, there were 424 business intelligence power users and 2,634 analytical users who were able to develop business intelligence reports. The Office of Information and Communications Technology is preparing to take a leading role in coordinating the demand and supply of business intelligence reporting, and a commonly agreed list of outstanding business intelligence reports is under preparation. The Office will concentrate its efforts on coordinating the development of the top 10 priority business intelligence reports. A communications approach for business intelligence is being developed and the Office has prepared a draft governance document to address critical needs in developing reports. These developments were reported after the Board had completed its audit.

Optimizing Umoja

51. The Board noted in its fourth report that the need for corrective action in major enterprise resource planning deployments such as Umoja was not unusual. However, in view of the lack of change management and the limited business process re-engineering performed before implementation, it also identified that the Administration might need to move substantially beyond recovery and stabilization of the system to ensure more fundamental optimization of the Umoja solution.

52. Although the Administration has made improvements to its administrative processes through the Umoja project, the problems experienced with deployments to clusters 3 and 4 continue to provide evidence that further significant improvements are still needed. While some organizations choose to re-engineer business processes once they have had some experience in operating them for a period of time, these are important undertakings that require significant management attention, funding and prioritization.

53. In its previous report, the Board recommended that the Administration evaluate the case for an Umoja optimization project, considering the links to the proposed global service delivery model and the opportunity it provides to widen business ownership and business leadership of Umoja reforms. The Board recognized that the project could not be achieved in parallel to the deployment of Umoja to clusters 3, 4 and 5 but that, subject to a clear business case being developed, it could begin in 2016.

54. The Board has previously reported that efforts to achieve go-live of the Umoja solution have been mainly focused on implementing the technical information technology system and support elements such as help desks, rather than ensuring the delivery of redesigned organizational structures and re-engineered end-to-end business processes in each entity. The Administration has stated that "Umoja, as opposed to any other typical enterprise resource planning implementation, had not one but multiple 'as is' operating models. Only after implementing the Umoja operating model are we able to complete the discovery process to identify the variations between every 'as is' model against the 'to be' harmonized model brought by Umoja". The Board has questioned this approach to change management previously, as it implies that limited impact analysis and process redesign was performed on an entity-by-entity basis as part of preparations for the implementation of Umoja.

55. To optimize the Umoja solution, each business unit in clusters 3 and 4 will need to apply an appropriate methodology and have access to expertise in operational improvement if it is to redesign administrative services in a manner which ensures the Administration can meet its commitments to:

- Exploit the potential of the Umoja solution and deliver the promised benefits
- Satisfy the demands of organizational transformation by developing overall "end state" operating models and strategies for each department (enterprise risk 2) and align those efforts with the future global service delivery model
- Implement the Board's recommendation on establishing a formal approach to managing and improving business processes to enable continuous reform and improvement following implementation of the enterprise resource planning system, first made in 2012 (A/67/164, para. 32).

56. The Board was informed that plans were being developed to meet those commitments, but at the time of audit there were no documented plans or agreed methodologies in place which it could examine. The Board was also informed, however, that the steering committee had agreed that the project director should establish a team of United Nations experts from the Office of Programme Planning, Budget and Accounts and the Umoja project to conduct a benefits realization pilot exercise with the Department of Field Support and non-peacekeeping cluster 3 entities. A methodology would be refined and then applied to the whole organization's benefits realization assessment, allowing for consistency in the assessment. Although there was limited information available to audit, the proposed approach appears to be an analytical exercise to define opportunities for improvement in response to the Board's recommendation on the need to refresh the Umoja business case (A/70/158, para. 19 (f)).

57. Under the terms of a memorandum issued by the Secretary-General on 29 January 2013, the responsibility rests with process owners for sign-off on the business case, showing the expected qualitative and quantitative benefits for the Organization to be realized once the "to be" model is implemented for the processes they lead and ensuring that each business case contains clear and appropriate key performance indicators. Defining and measuring opportunities are necessary first steps to implementing improvements in the administrative operating model of each business unit. However, realizing benefits will also require an agreed approach and clear accountabilities for doing so. It is currently unclear:

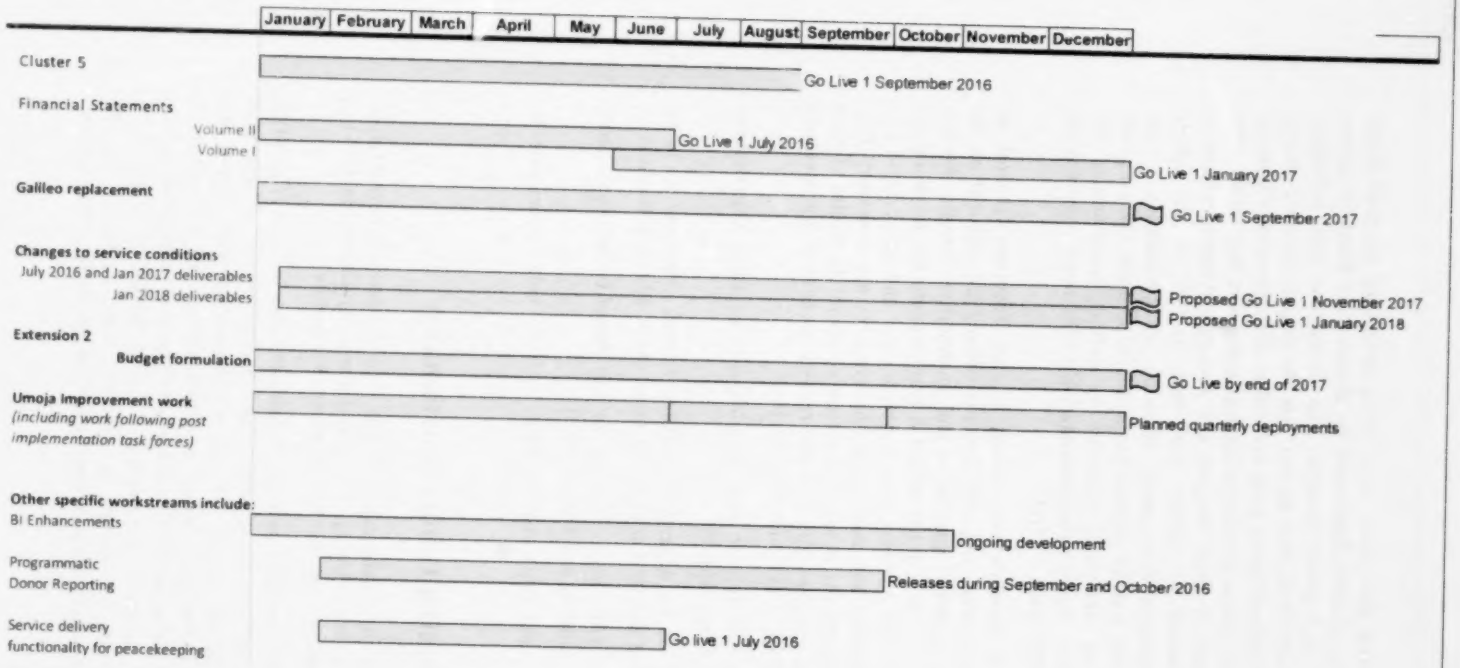
- How process owners will release cost or time savings from departments/offices not under their direct control
- What incentives there are for departments/offices to seek opportunities to get benefits and release cost and time savings for other value-adding activities
- How process owners will work together to get benefits that cut across processes and lines of funding and accountability
- How process owners and departments/offices will be held to account for achieving benefits

IV. Delivering the remaining Umoja functionality

58. In the present section, the Board examines the Administration's current plans for delivering the remaining functionality. The Board also considers the factors that may prevent the Administration from meeting its planned schedule.

59. The Administration has started a number of work streams in 2016 (fig. VI) as well as resolving the issues from the cluster 3 and 4 deployments. These work streams include deploying to cluster 5 and recommencing the design and deployment of the budget formulation elements of Extension 2. The Administration has yet to plan out the remaining activities, such as workforce planning, that need to be delivered from 2017 onwards to deploy the full scope of Umoja. The Administration is expected to submit a revised plan covering the full implementation of Umoja to the General Assembly during the seventy-first session.

Figure VI
Current Umoja delivery plan for 2016



Source: Data from the Administration.

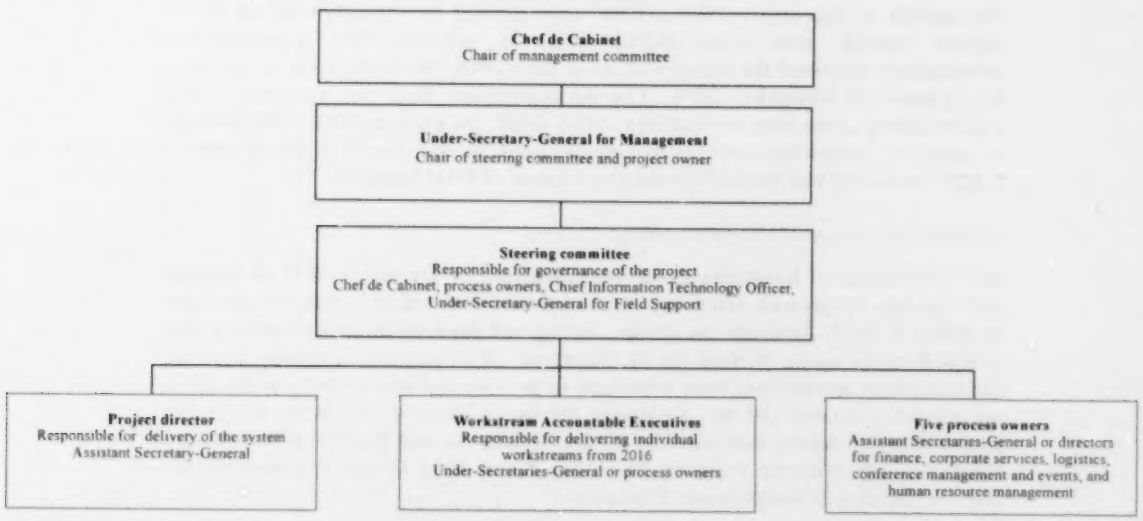
Revised approach to delivery

60. During 2016, the Administration has agreed that business units will now take greater responsibility for the delivery of some major elements of the project (see fig. VII). The Administration has appointed either the Under-Secretary-General or the process owner from the most relevant business unit to be the accountable executive for each work stream. For example, the Under-Secretary-General for Field Support is now responsible for leading cluster 5 deployment, given that it affects peacekeeping and special political mission staff. The Umoja team will still be responsible for building the solution, but all the other elements, such as planning and deployment preparations, are now the responsibility of the business units.

61. To reflect these new arrangements, the Administration has introduced executive checkpoints as a new form of reporting. These are key milestones used to help the Administration assess the readiness of 2016/17 work streams. They replace the scorecards and quality gates used during 2015. The Administration has set out eight checkpoints for 2016 and work streams will be assessed at each, if appropriate. It is too early to assess the effectiveness of these new arrangements, but the Board considers that this approach will continue to help strengthen the partnerships between the Umoja team and the business units.

62. In April 2016, the Administration reported in its second executive checkpoint that it considered three of the four work streams were on track or had minor deviations, including cluster 5 deployment. It rated insufficient progress on the fourth work stream, the implementation of changes to staff conditions of service and entitlements.

Figure VII
Key roles in the delivery of the enterprise resource planning project


Chef de Cabinet
Chair of management committee
Under-Secretary-General for Management
Chair of steering committee and project owner
Steering committee
Responsible for governance of the project
Chef de Cabinet, process owners, Chief Information Technology Officer, Under-Secretary-General for Field Support
Project director
Responsible for delivery of the system
Assistant Secretary-General
Workstream Accountable Executives
Responsible for delivering individual workstreams from 2016
Under-Secretaries-General or process owners
Five process owners
Assistant Secretaries-General or directors for finance, corporate services, logistics, conference management and events, and human resource management

Source: Board of Auditors.

63. The Administration, however, continues to lack independent assurance of the planning and delivery of Umoja. Scrutiny of the project remains internal, either conducted or commissioned by the project team or consisting predominantly of self-assessment by the entities involved. For example, the executive checkpoint process is a combination of self-assessment and scrutiny by the project team. The continued absence of strong independent assurance mechanisms increases the risk that over-optimistic assessments of organizational readiness will occur in future deployments.

Capacity to deliver 2016 work streams

64. At the time of audit, the Umoja development team continued to be almost wholly dedicated to fixing cluster 3 and 4 issues. The Administration has sought to coordinate the key milestones of its numerous 2016 work streams to reduce concurrent demands on staff capacity. In its 2016/17 plan, for example, the Administration plans to deploy Umoja to cluster 5 in September 2016, after the financial reporting deadline for peacekeeping has passed. However, the ongoing need to provide support to stabilize clusters 3 and 4 poses a significant risk to the delivery of other 2016 work streams. Many of the skilled resources required to resolve implementation problems cannot be obtained "off the shelf", as knowledge of both the enterprise resource planning software and United Nations business processes is required. This work has therefore diverted key staff from the development of the solutions required for cluster 5 and Extension 2.

Deferred deployment to cluster 5

65. In his previous report, the Secretary-General stated that cluster 5 deployment, which provides payroll functionality for approximately 20,000 national staff and also individual uniformed personnel, would be implemented in April 2016. However, at the time of audit the Administration planned to defer deployment by five months to September 2016 and had also allowed for extensive testing of the payroll module with those entities prior to roll-out. The Administration subsequently informed the Board that, as at June 2016, the deployment to cluster 5 had slipped to November 2016. The Administration does not yet have a full understanding of the cost implications of this delay, but estimates that $620,000 will be spent on consultants for cluster 5 deployment, in addition to the staff time of Umoja team members and staff in the Department of Field Support.

Delayed completion of Umoja Extension 2

66. The design of Extension 2 was not completed by December 2015 as planned and has not progressed since the Administration estimated it was 40 per cent complete in 2013. Although the design, testing and deployment of Extension 2 was included in the scope of work for its September 2014 systems integrator contract, the integration partner has been requested to provide services to recover delays in the project timetable and to supplement the lack of appropriate skills within the project team to deploy and stabilize Umoja Foundation and Extension 1. It is also likely that any renewed work on Extension 2 will need to reflect enhancements made to stabilize Foundation and Extension 1.

67. Under the current plans, the Administration aims to design and deploy certain elements of Extension 2 over the next three years, but the delivery of much of the remaining functionality is not yet planned in detail. At the time of audit, the

Administration had just started planning delivery of the budget formulation module for deployment by the end of 2017. This module covers just under 10 per cent of the business processes planned for delivery in Extension 2. The Administration has yet to develop any detail on the deployment of the remaining 90 per cent of Extension 2 functionality.

68. The remaining processes are not in the Administration's work plan for 2016, although the Umoja team plans to start work on two modules for supply chain management in 2017. Other Extension 2 functionality yet to be deployed includes processes relating to force planning, grants management and conference and event management. A revised plan covering the full implementation of Umoja is expected to be provided by the Administration to the General Assembly during the seventy-first session. The current lack of detailed planning for the deployment of Extension 2, combined with the ongoing work to stabilize clusters 3 and 4, introduces increased uncertainty around the projected costs and timetable for completing the Umoja project.

Implementation of changes to staff conditions of service

69. In December 2015, the General Assembly adopted resolution 70/244 to change a number of the conditions of service and the entitlements of United Nations staff. The changes include changes to staff assessment rates and pension scales. Some of the changes will require amendments to payroll and human resources systems across all United Nations entities, including Umoja, so that they can be applied, processed and reported correctly. The Assembly also set a number of clear deadlines for when those provisions would be implemented, the first deadline affecting Umoja being for changes to relocation-related elements and some field allowances and benefits on 1 July 2016.

70. The Administration worked with other United Nations entities to specify new software requirements to implement the changes to conditions of service and submitted them to the software vendor in March 2016. The software vendor provided a schedule for delivering the new software requirements by the end of March 2016.

71. The main target dates approved by the General Assembly for implementing the changes were 1 July 2016 and 1 January 2017, but at the time of preparation of the present report the Administration had concluded that it was unable to meet those target dates,. primarily because there would be insufficient time to conduct the necessary development and testing of the new software. This work may also affect the Administration's ability to deliver its other 2016 work streams, as implementing the changes will divert project staff with specialist knowledge of human resources, payroll and Umoja away from other work streams. The cluster 5 deployment may be particularly affected, as there are inherent interdependencies between the human resources and payroll functionality.

72. The vendor has confirmed that it will make any software changes free of charge where they arise from such "legal changes" approved by the General Assembly.

V. Supporting the Umoja solution

73. In the present section, the Board considers the status of the Administration's planning for mainstreaming Umoja into a "business as usual" operation in which technical and applications support is provided by the Office of Information and Communications Technology. However, mainstreaming activities are not limited to technical support; other areas, such as training and maintaining up to date procedural guides, will also need to be mainstreamed.

Mainstreaming plans

74. Umoja has been live in peacekeeping operations for three years and is now deployed across all non-peacekeeping entities. Under normal circumstances, the responsibility for maintaining and supporting the production environment would have been transferred to the business units and "mainstreamed". However, mainstreaming activities were not planned and budgeted as part of Umoja and, as reported in the Board's report on information and communications technology affairs (A/70/581), the Office of Information and Communications Technology had not yet built up the full range of skills and capability to support an enterprise resource planning system of the size and scale of Umoja.

75. In his seventh progress report on the enterprise resource planning project, submitted to the General Assembly in September 2015, the Secretary-General noted that, in parallel to the phase-out of the Umoja team, a plan to gradually transfer knowledge and responsibilities from the team to the corresponding areas of the Secretariat continued along three lines: (i) to the process owners; (ii) to the Chief Information Technology Officer; and (iii), with respect to training, to the Office of Human Resources Management (A/70/369, para. 61).

76. The transfer of Umoja is included in the five-year strategic plan of the Office of the Chief Information Technology Officer and is not expected to be completed until 2019. Mainstreaming activities have started: first-line Umoja support is being provided by the global Unite service desks staffed by local and Office of Information and Communications Technology resources in Bangkok, Geneva (with a subgroup in Vienna), Nairobi and New York. The Office of Information and Communications Technology is also providing some technical development and support services for infrastructure, business intelligence, interfaces, access controls and security. The Office has continued to harmonize global support and in March 2016 terminated the support contract with the International Computing Centre for Tier 2a support in Brindisi, which continues to operate as a support desk for Department of Field Support issues only. However, the transfer of responsibility for the support and maintenance of the Umoja solution as a whole to the Office of Information and Communications Technology is a major undertaking, which requires careful planning and coordination.

77. The Umoja team and the Office of Information and Communications Technology have been discussing a mainstreaming plan since January 2013 and initial drafts were presented in 2014 and 2015. The seventh progress report on the enterprise resource planning project specifies that the Umoja team and the Chief Information Technology Officer have identified all the functions to be mainstreamed to the Chief Information Technology Officer area and have developed a high-level project plan. A more detailed mainstreaming plan was requested as part of the audit.

To date, only a high-level milestone plan has been provided, although the Board has been informed that a refined plan will be submitted with the eighth progress report to the General Assembly during the main part of the seventy-first session, later in 2016.

78. Work to develop that plan is ongoing. In March 2016, the Office of Information and Communications Technology, the Department of Field Support and the Umoja project team held a three-day retreat in New York to relaunch work on the mainstreaming plan. The output of the retreat was a set of high-level milestones. These milestones were focused on the handover of technical and project delivery responsibilities from Umoja to the Office of Information and Communications Technology and did not include the actions required by all process owners to mainstream or optimize the solution.

79. No detail was provided regarding the expected costs, staff resources and tasks needed to transfer responsibility for Umoja from the project team to the business units. The three-day retreat was not attended by representatives of other parts of the Administration, such as the Office for Human Resources Management, that may need to support or may be dependent on aspects of the mainstreaming plan. There are no plans in place setting out what functions need to be transferred to other business units to ensure that Umoja can continue in operation once the Umoja team is disbanded.

80. A realistic budget for mainstreaming activities cannot be formulated in the absence of detailed and fully costed transition plans. As the Umoja project budget does not provide for those costs, there is a risk that substantial and unforeseen costs will need to be absorbed by the Office of Information and Communications Technology. The Administration has informed the Board that the mainstreaming resources to be included in the revised estimates for 2016/17 will be presented in the Secretary-General's eighth progress report.

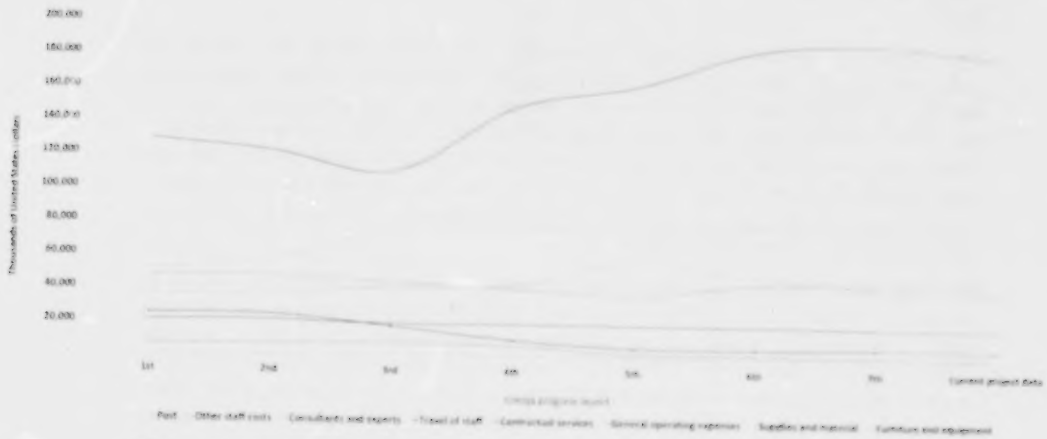
VI. Umoja costs

Project budget and expenditure

81. Designing, building, implementing and stabilizing Umoja Foundation and Extension 1 has required a significant amount of staff and contractor effort, which has consumed most of the approved project budget. By 31 December 2015, the Administration had spent $374.1 million on the project (97 per cent of the approved $385.1 million budget to that date). Reported expenditure on Umoja excludes the costs absorbed by business units in preparing for deployment.

82. In resolution 70/248, the General Assembly requested the Secretary-General to continue to implement Umoja within the approved timeline and budget and to provide detailed information on the full implementation of the Umoja solution no later than its seventy-first session. A further $54.3 million was approved, increasing the total approved project budget up to the end of 2017 to $439.4 million. The growth in the project's forecast cost has been primarily linked to increased expenditure on contractual services (fig. VIII). By 31 March 2016, the Administration had spent $385.4 million on the project (88 per cent of the then approved budget of $439.4 million).

Figure VIII
Increases in the forecast cost of Umoja by object of expenditure



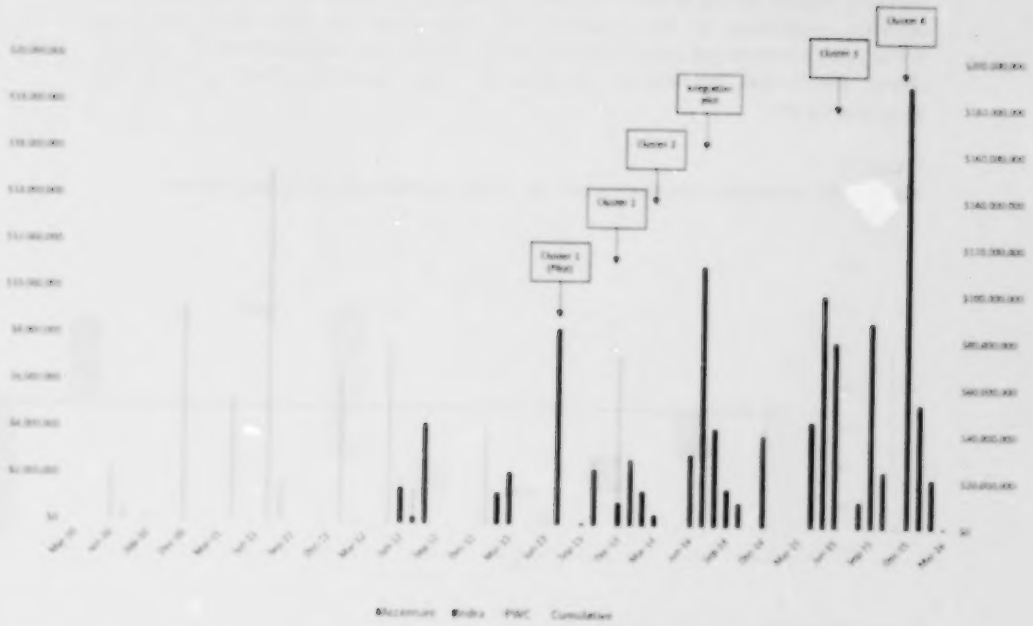
Source: Analysis by the Board of the progress reports of the Secretary-General.

83. The Umoja team has continued to improve the monitoring of costs. Following its initial efforts in 2015 to track time spent by consultants on activities, the team is now using Umoja functionality to monitor that contract awards are spent as intended. The Umoja team has configured a set of business intelligence tools to create a funds management dashboard which will track and report spending against Umoja statements of work, supplier contracts and purchase orders and report on budget consumed and budget committed. However, the tool is of limited use in tracking project progress, as it reflects consumption of resources rather than achievement of project deliverables. As there are still not clear links between cost and progress, the Board is still unable to provide assurance that the project has delivered outputs proportionate to the total costs incurred.

Expenditure on post-deployment contractual support

84. The costs to deploy, fix and stabilize Umoja in clusters 3 and 4 exceeded the Administration's estimates. Increased expenditure was mainly due to the cost of additional development work to fix problems identified during the deployments to date, and the use of more expensive contractors to fill vacancies in the project team. The Administration estimates expenditure of $51.6 million in 2016 against a budget of $30.4 million. Figure IX shows the value of purchase orders raised against contracts with the project's main design, build and deploy vendors in relation to the timing of Umoja deployments. The value of purchase orders raised increased significantly around the time of the deployment pilots for cluster 1 and Integration, and following the deployment to cluster 4.

Figure IX
Purchase orders raised for main Umoja contractors



Source: Board's analysis of the Administration's data

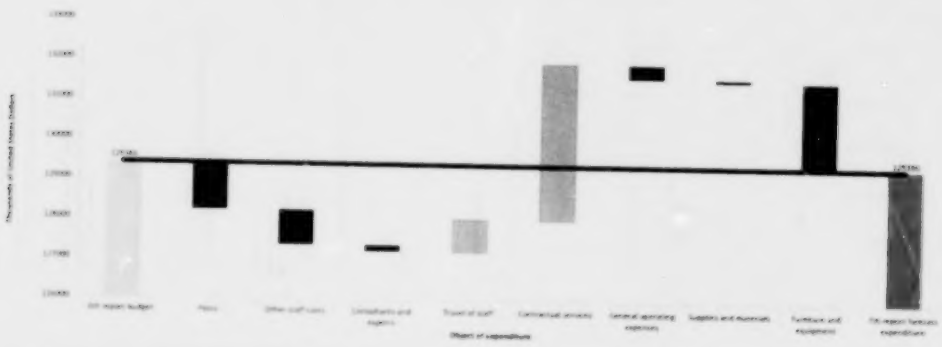
85. Contractual support for the build, test and deployment of Umoja has been provided through three main contracts. The first of these, awarded in 2012, had a not to exceed value of $24.6 million to build, test and deploy Umoja Foundation. The second, awarded in 2013, had a not to exceed value of $12 million to build, test and deploy Extension 1. By 2014, the not to exceed values of these contracts had more than doubled to $64.9 million and $24.2 million respectively. The growth in cost was driven primarily by use of the discretionary services "time and materials" elements of the contracts.

86. In 2014, the Administration agreed a third contract, covering systems applications management and integration services for Umoja. The contract included a scope of work for the design, build, test and deployment of Extension 2 and had a not to exceed value of $65 million. Three months later, the contract's not to exceed value was increased by $34.8 million to $99.8 million following a reassessment of the work needed. That non-competitive award covered additional discretionary services within the same scope and was made just weeks after the original competitive contract award. The contractor has been requested to provide additional services to help recover delays against the project timeline and to supplement the lack of appropriate skills within the project team to deploy and stabilize Umoja Foundation and Extension 1 in clusters 3 and 4.

Movement of funds to contain cost increases

87. Cost increases in some areas have been managed by reallocating funds between objects of expenditure. In the October 2015 budget update provided to the steering committee, it was reported that throughout the year funds had been redeployed between objects of expenditure to provide for unplanned costs. Figure X shows the budget movements between the Administration's sixth and seventh progress reports.

Figure X
Movement of project funds between the sixth and seventh progress reports



Source: Documents A/69/385 and A/70/369.

88. The Board's initial review of movement between objects of expenditure has identified two areas of budget reductions that have created headroom of $25.5 million over the life of the project. Estimated travel costs were $24.6 million in 2010, but had decreased to $7 million in 2015. Similarly, under furniture and equipment, in September 2013 an additional $13.8 million was requested, but in September 2014 a decrease in requirements of $7.9 million was reported. In this regard, the Board has in the past raised concerns about redirecting funds intended for user training to other project activities.

Cost of Umoja Extension 2

89. Extension 2 includes 133 processes linked to areas such as budget formulation, supply chain management and grants management. The design of Extension 2 was not completed by December 2015 as planned and has not progressed significantly since the Administration estimated it was 40 per cent complete in 2013 (see A/68/375, para. 26). It is likely that revisions to Umoja Foundation and Extension 1 will result in some rework of Umoja Extension 2 design and build.

90. The costs of design, build, test and deployment of Extension 2 were to have been met from within the existing systems integrator contract. However, no expenditure has been made against the relevant work package within that contract. Funds nominally assigned to that work have instead been used to fund the deployment and stabilization of existing Umoja functionality. Further funds will

therefore be required to complete the design of Extension 2 and to test, deploy and stabilize it across the United Nations.

91. The Administration has estimated previously that completing Extension 2 would require an additional $30 million for contractual services (see A/67/360, para. 24 and A/69/385, para. 104). The funds required to complete Extension 2, and the level of effort and cost required from the project team and the business units, mean that the actual funds required are now likely to exceed the Administration's previous estimate.

92. Despite the history of prolonged and costly stabilization periods required following previous deployments, the Administration has not provided any contingency funding to rectify any problems arising on deployment of new functionality under Extension 2.

Indirect or associated costs of Umoja

93. The Administration does not have a clear understanding of the indirect costs absorbed by business units for activities such as data cleansing, training and user testing. As previously reported, neither the project nor relevant departmental budgets include explicit provision for such costs. In considering how to meet the associated costs, the Administration concluded in 2013 that they should be borne by existing departmental budgets and put that policy into effect for the biennium 2014-2015 budget.

94. The Administration has sought to estimate the associated costs in some areas, predominantly for information and communications technology. As reported in the Board's previous report, the Administration estimated that additional ICT costs amounted to $38.2 million in the biennium 2014-2015 and forecast further costs of $24.8 million in the biennium 2016-2017. The Administration also estimated that recurrent operating costs for the biennium 2016-2017 will be $29.6 million, with those costs now being absorbed by the entities using Umoja. These are broad estimates, with much of the investment also supporting other United Nations systems, as well as Umoja.

95. To contain increases in project costs, more of the burden of funding relating to Umoja implementation has also been passed to departments. Project expenditure has been lower than projected in some areas where cost elements have been transferred to or covered by the business. The Board has identified costs totalling at least $27.1 million that have been absorbed by the business. These costs relate to previously budgeted licensing and maintenance costs passed to the Office of Information and Communications Technology and the Department of Field Support, and the costs of corrective work funded by that Department to support stabilization of the Umoja solution. The project budget did not change as a result of costs being passed to the business, or after the additional funds were provided.

Long-term support costs and total cost of ownership

96. Total cost of ownership is an analysis performed to identify all the lifetime costs, including acquisition and operating costs, that follow from owning assets such as Umoja. In addition to purchase and development costs, owning major enterprise resource planning systems such as Umoja incurs substantial costs for installing, deploying, operating, upgrading and maintaining the system over time.

During the audit, the Board requested the Administration to provide its estimate of the total cost of ownership of Umoja, but was informed that it was not available for audit.

97. The Administration has not calculated the total cost of acquisition and operation of Umoja. Estimates of future support and maintenance costs contained in the Secretary-General's previous progress reports range from $30 million to $50 million a year. Although a more recent estimate was significantly higher, the Administration has informed the Board that it is unverified and is considered unreliable. On the basis of the previously published estimates, the total cost of ownership of Umoja over the initial 15 years of the vendor licence agreement will most likely exceed $1 billion. In the Board's view, the Administration needs to ensure that Member States have improved visibility of the resources likely to be needed to support Umoja over the medium to long term; the Board notes that those costs were excluded from the Administration's five-year budget forecast for ICT expenditure (see A/70/364).

VII. Umoja benefits

Refreshing the Umoja business case

98. The Administration has stated that it remains committed to realizing cumulative quantitative benefits of between $140 million and $220 million by 2019 (A/70/369, para. 52). Benefits are expected to flow from refined business processes, automation, reduced duplication and streamlined administrative processes. The Administration stated previously that it expected to realize benefits of $81.4 million in 2017 (A/69/385, para. 60). Those estimates are based on an assessment of potential benefits undertaken in 2009 and 2011, so do not reflect what the project might realistically deliver in the current circumstances. The benefits profile also relies largely on the flexible deployment of staff.

99. There is also evidence that circumstances have changed regarding the expected benefits. For example, in his second annual progress report on Umoja, the Secretary-General indicated that annual support costs for IMIS were around $9 million and that decommissioning IMIS and the 682 non-IMIS systems to be replaced by Umoja would lead to annual benefits of $29.1 million to $48.5 million. It was planned that those resources would be redirected to support the new enterprise resource planning operations. However, the actual benefits achieved from decommissioning legacy systems to date have not been estimated and some systems such as Galileo will not now be retired as quickly as originally planned.

100. In its fourth report (A/70/158), the Board recommended that the Administration refresh the Umoja business case, drawing on the experience of the Department of Field Support and clusters 3 and 4, and that the update should reflect realistic assumptions, including the ability of the Administration to flexibly deploy staff. The Administration identified subsequently that the implementation of Umoja in six offices and departments and 33 peacekeeping operations and special political missions presented an opportunity to refresh the Umoja business case (A/70/369, para. 54). It stated that a team had been established to reassess how the benefits realization targets would be achieved and to develop benefits realization plans.

101. However, the Administration has not yet conducted that assessment or established a clear baseline from which it can measure the benefits actually

achieved. In response to its request for a copy of a project benefits register, the Board was advised that there was not one. The Administration stated that the total amount of Umoja benefits realized so far was reported in the Secretary-General's progress reports on Umoja and that detailed information on benefits realized by offices and missions was contained in the relevant budget documents. The Board has reviewed the Secretary-General's seven progress reports on the Umoja project and notes that they contain no information on any specific benefits that have been realized and validated. The absence of any central register of benefits indicates that there is still no coherent plan for realizing and validating benefits across end-to-end processes.

102. The United Nations still has not established an agreed approach to get the service delivery and financial benefits from adopting the Umoja solution. The Board has made a number of recommendations in its four previous reports to improve wider business transformation efforts. In particular, key elements which remain to be implemented include: baselining current performance; developing a target operating model to support the new end-to-end processes in each business unit; and training staff on a formal approach to continuous improvement to solve business problems as they arise. Now that the solution has been implemented, the Administration has acknowledged it needs to address these gaps as a matter of urgency.

103. The Administration may be missing further opportunities to improve service delivery and realize genuine operating efficiencies. A firm budget reduction target was agreed centrally and departments were then asked to identify how they could each contribute to achieving that cost reduction target. Departments were asked to identify opportunities for budget reductions arising from frozen posts, abolished posts and non-post reductions. The lack of baseline performance data increases the risk that reductions have been agreed on the basis of departments' willingness to absorb reductions, rather than on the potential reduction achievable.

104. The Administration has abandoned plans in place at the time of the Board's audit to identify "concrete opportunities" to realize benefits in peacekeeping operations in the first quarter of 2016 and is now developing a new methodology, using data available from Umoja to identify benefits. Overall, the Administration has made very limited progress with regard to the Board's recommendations on improving benefits realization, and has again failed to demonstrate it has in place a methodology which will deliver the maximum amount of quantitative (cashable, as opposed to non-cashable) and qualitative (service delivery) benefits.

Validation of claimed benefits

105. The Administration remains committed to realizing qualitative and quantitative cumulative benefits in the overall range of $140 million to $220 million a year by 2019. The realization of benefits in this range was originally based on the assumption that Extension 2 would be designed by the end of 2015 and deployed in two annual releases from 2017. However, the Administration informed the Board that it now believes it can realize benefits in this range prior to deploying Extension 2.

106. The Board was unable to validate the "tangible benefits realized" reported to the Advisory Committee on Administrative and Budgetary Questions in September 2015. No credible evidence to support claimed tangible benefits was provided by the Umoja process owners. The Office of Central Support Services provided some

evidence for audit, but its work was at an early stage. For example, the Office is developing plans on how Umoja can improve the Organization's ability to negotiate better corporate agreements with travel service providers and airlines. However, the reporting functionality and skills required to support such analysis and renegotiation were not yet in place and improved agreements had not been negotiated.

107. The Office of Human Resources Management considered that it was too soon to say what the tangible benefits of Umoja were, although its submission to the Advisory Committee on Administrative and Budgetary Questions indicated benefits in the form of increased integration of human resources systems and easier monitoring of staff leave balances. Overall, despite the lack of evidence of tangible realized benefits to date, there is growing evidence that real opportunities exist to exploit benefits from the Umoja solution. For example, the Office of Programme Planning, Budget and Accounts has improved management information on the status of spend against budgets by departments. However, the reports used still require considerable manual effort as they have not yet been automated within Umoja.

108. The Secretary-General's January 2013 memo on the role of the process owners identified that they are each responsible for their end-to-end cross-functional processes and for "[signing] off the business case showing the expected qualitative and quantitative benefits to be realized once the 'to be' model is implemented for the processes they lead, ensuring that each business case contains clear and appropriate key performance indicators". The Board has seen no business cases or any key performance indicators. Without such business cases, it remains unclear to what extent any planned benefits will require the flexible deployment of staff or when such changes will be proposed for approval by the General Assembly.

VIII. Acknowledgement

109. The Board wishes to express its appreciation for the cooperation and assistance extended to its staff by the Under-Secretary-General for Management and the project director, together with the members of their staff.

(*Signed*) Mussa Juma **Assad**
Controller and Auditor-General of the United Republic of Tanzania
Chair of the Board of Auditors

(*Signed*) Sir Amyas C. E. **Morse**
Comptroller and Auditor-General of the
United Kingdom of Great Britain and Northern Ireland
(Lead Auditor)

(*Signed*) Shashi Kant **Sharma**
Comptroller and Auditor-General of India

30 June 2016

Annex I

Status of implementation of recommendations

Report reference	*Summary of recommendation*	*Administration comments on status — April 2016*	*Board comments on status — April 2016*	*Fully implemented*	*Under implementation*	*Not implemented*	*Closed by the Board*
A/70/158, para. 19 (a)	Increase the degree to which Umoja is actively and visibly led by all heads of business units, with support from process owners and Umoja project management.	The Administration requests that this recommendation be closed. The Umoja project team continues to work with heads of business units to improve and refine their service delivery model. The global service delivery model team will contribute in refining the global service delivery model.	In section IV of the present report the Board notes the Administration's progress during 2015 in increasing engagement by the heads of business units during the roll-out of Umoja to entities in clusters 3 and 4. All the Under-Secretaries-General provided positive confirmation that their areas were ready to implement Umoja. The Board also notes the transfer of accountability for delivery of some elements of the project to business units, notable where the Department of Field Support has accepted responsibility for the deployment to cluster 5.		X		
A/70/158, para. 19 (b)	Assess thoroughly the risks attached to the current Umoja deployment schedule and consider contingency and other measures that may be necessary to mitigate those risks.	The Administration considers this recommendation to be under implementation. The project plan and corresponding cost estimates for 2017, 2018 and 2019 will be presented to the General Assembly for approval in the eighth annual progress report on Umoja. Once they have been approved, this recommendation should be closed.	In section III of the present report, the Board notes that the scale of implementation problems experienced post implementation exceeded the capacity of the Umoja team and support network. Although some mitigations were put in place pre-implementation, such as establishing deployment groups to support ramp-up and go-live activities, it is too early to say whether the results of such work fully addressed the identified risks. The Board will consider this recommendation implemented when the Administration confirms the deployment schedule to deliver the remaining scope, including performing a risk assessment and contingency measures required through to the end of the project.		X		

Report reference	*Summary of recommendation*	*Administration comments on status – April 2016*	*Board comments on status – April 2016*	*Fully implemented*	*Under implementation*	*Not implemented*	*Closed by the Board*
A/70/158, para. 19 (c)	Independently review the estimated capacity required across the support model to meet expected demands following cluster 3 and 4 deployment and take action to address any gaps.	The Administration considers this recommendation implemented as cluster 3 and cluster 4 were successfully supported by the Unite Service Desk.	The Administration was confident that it had adequate support arrangements in place and did not invite an independent review of the arrangements. This recommendation was therefore not implemented.			X	
A/70/158, para. 19 (d)	Review the timing and adequacy of funding arrangements for the rationalization of the ICT help desks to minimize any risks to the provision of support to Umoja.	The implementation of this recommendation is in progress.	The Board notes the Administration's response and that support arrangements are under review.		X		
A/70/158, para. 19 (e)	Develop a detailed transition plan for transferring responsibility for technical support of Umoja from the project team to the Office of Information and Communications Technology.	The implementation of this recommendation is in progress.	The Board acknowledges the steps that the Administration is now starting to take in planning and transferring technical support from the Umoja team to the Office of Information and Communications Technology. The Board will consider this recommendation closed when a detailed transition plan has been developed and agreed upon.		X		
A/70/158, para. 19 (f)	Refresh the Umoja business case, drawing on the experience of the Department of Field Support and clusters 3 and 4.	The Administration considers this recommendation to be under implementation. It has initiated the Umoja benefits realization process, consisting of a three-pronged approach containing qualitative benefits, longer-term return on investment calculation, and quantitative benefits, which will be based on the main categories of processes affected by Umoja in each of the main process areas. The analysis will	The Board will consider this recommendation implemented when the business case for Umoja has been refreshed. The approach described by the Administration was not presented for audit.			X	

Report reference	Summary of recommendation	Administration comments on status — April 2016	Board comments on status — April 2016	Fully implemented	Under implementation	Not implemented	Closed by the Board
		inform the Secretary-General's progress report on Umoja and the budget outline for 2018-2019. The Administration notes that the Umoja benefits realization process is evolving in alignment with the implementation of future planned clusters, including for supply chain management, not yet implemented. In addition, it is contingent on the overall stabilization of Umoja. The Umoja business case will be updated in tandem with revised assumptions concerning potential qualitative and quantitative benefits.					
A/70/158, para. 19 (g)	Evaluate the case for an Umoja optimization project, considering the links to the proposed global service delivery model and the opportunity it provides to widen business ownership and business leadership of Umoja reforms.	The Administration recognizes that opportunities exist for the Secretariat to better deliver on its mandates, supported by administrative services that provide what is needed, when needed and where needed. As requested by the General Assembly in its resolution 70/248, section XIX, the Secretary-General will submit a detailed proposal on the global service delivery model to the Assembly at the seventy-first session. Accordingly, the Administration requested that this recommendation be closed with respect to A/70/158 and progress be monitored in any future Board of Auditors' reviews of the global service delivery model.	The Board acknowledges the work being conducted on the global service delivery model and that the Administration recognizes the need to optimize the Umoja solution.		X		

Report reference	*Summary of recommendation*	*Administration comments on status – April 2016*	*Board comments on status – April 2016*	*Fully implemented*	*Under implementation*	*Not implemented*	*Closed by the Board*
A/69/158, para. 29 (b)	Heads of business units, the process owners and the project team should each provide positive confirmation to the management committee that all enablers necessary for a successful roll-out are in place.	Umoja will continue with operational readiness reviews for each deployment. Positive confirmation from heads of business units continues to be recognized as an essential part of go-live.	Heads of clusters 3 and 4 business units provided positive confirmation that their entities were ready to go live at the May and November 2015 management committee meetings respectively. The Board therefore considers that, as the process has been implemented for clusters 3 and 4, this recommendation has been implemented, but it expects that the process of providing positive confirmation will continue for all future roll-outs.	X			
A/69/158, para. 29 (c)	Continue to embed the concept of process ownership by strengthening the partnership with heads of business units.	The Administration, in partnership with the process owners, has aligned efforts in accordance with the approach for Umoja benefits realization implementation, as decided by the Umoja steering committee. See also the Administration's comments above relating to the recommendation in paragraph 19 (f) of document A/70/158.	With the exception of the Assistant Secretary-General, Office of Central Support Services, process owners were unavailable for interview at the time of audit. However, progress has been made on this recommendation, as acknowledged in section II of the Board's previous report. This recommendation will be judged to be fully implemented when the Administration, establishes formal mechanisms for agreeing benefits realization plans, in accordance with the Secretary-General's 2013 memo on process ownership. In addition, process owners now need to fully define how they will "own" the end-to-end business processes in their current areas of responsibility in the light of the Umoja solution and the proposed global service delivery model.		X		

Report reference	*Summary of recommendation*	*Administration comments on status — April 2016*	*Board comments on status — April 2016*	*Fully implemented*	*Under implementation*	*Not implemented*	*Closed by the Board*
A/68/151, para. 16	The Board recommends that the Administration design, communicate and implement a plan within each business area to exploit the defined benefits of up-to-date and consolidated data from the enterprise resource planning system, including how it intends to realize both qualitative and quantitative benefits of improved information.	The Administration considers this recommendation to be under implementation. The Office of Central Support Services has been working with the Office of Programme Planning, Budget and Accounts in the delivery of training specific to business intelligence. Furthermore, the Office of Central Support Services is coordinating with the Umoja Academy to develop a train-the-trainer workshop for business intelligence in which all entities will participate. As part of the IPSAS sustainability plan, the Office of Programme Planning, Budget and Accounts is carrying out a pilot on professional financial management training, which includes making Chartered Institute of Public Finance and Accountancy (CIPFA) qualification available for staff of the Office, and integration of CIPFA training into the training programme of the Organization. This pilot will assist the Administration in determining the scope for future budgeting requirements.	The Administration's response indicates limited progress has been made in developing a plan to realize benefits from improved information in each business unit. On that basis, this recommendation is viewed as not implemented.			X	

Report reference	*Summary of recommendation*	*Administration comments on status – April 2016*	*Board comments on status – April 2016*	*Fully implemented*	*Under implementation*	*Not implemented*	*Closed by the Board*
A/68/151, para. 26	The Board recommends that the Administration design a robust methodology which clearly defines: (a) the current status of operational performance in each business unit regarding time, cost, quality; (b) the level of future performance to be achieved post-implementation; (c) the approach and investment involved to achieve the future performance target; and (d) how the benefit achieved will be measured and reported.	In resolution 70/248, section XIX, the General Assembly requested the Secretary-General to report on the development of a global service delivery model at the main part of the seventy-first session of the General Assembly and to continue to gather information to support the business case for such a model, including comprehensive baseline information on the provision of services for each process. In its report on a framework for a global service delivery model of the United Nations Secretariat (A/70/436), the Advisory Committee on Administrative and Budgetary Questions stressed the need to record, at the start of the implementation of the project, baseline information on the key parameters of the existing service delivery arrangements that can be used to assess progress as the project evolves. The baseline information should include elements such as the volume of activity, the locations from which the service is provided, the related resources, including staffing resources, and estimates of unit costs. This process has commenced as part of the "Assess" phase of the project and will continue throughout 2017.	This recommendation was made in response to the Board's findings on weaknesses in the operations management of end-to-end administrative processes in several departments, and the lack of a holistic approach to operational improvement in the United Nations. Responding to this recommendation is the responsibility of each business unit, drawing on support from process owners, the Umoja project team and several project teams responsible for other improvement initiatives such as the global service delivery model, IPSAS, human resources mobility, a flexible workspace and wider estates management, the global field support strategy and the ICT strategy. The Board notes the Administration's response, and views this recommendation as being under implementation.		X		

Report reference	*Summary of recommendation*	*Administration comments on status — April 2016*	*Board comments on status — April 2016*	*Fully implemented*	*Under implementation*	*Not implemented*	*Closed by the Board*
A/68/151, para. 81	The Board recommends that the Chief Information Technology Officer prepare an overarching commercial strategy which seeks to (a) optimize the value from major suppliers to the enterprise resource planning project, balancing cost and risks to delivery; and (b) sets out the parameters against which all future procurements should be undertaken.	The implementation of this recommendation is in progress.	The Administration has not presented a commercial strategy. The recommendation will remain open until the Board sees evidence of a long-term commercial strategy for the whole life cycle of Umoja. However, given the shift in responsibilities to the Chief Information Technology Officer in accordance with the approved ICT strategy, the Board has reworded the recommendation and now addresses it to the Chief Information Technology Officer to ensure that accountability for implementation of part (b) of the recommendation is clear. The Board will consider the Office of Information and Communications Technology's global sourcing strategy in its next report.		X		
A/68/151, para. 84	The Board recommends that the enterprise resource planning project team finalize as a matter of urgency the work to develop (a) a detailed and fully integrated project plan, and (b) significantly enhanced project management arrangements to enable more detailed cost and timetable forecasting, and control of risks, including appropriate scenario and contingency planning.	The Administration requests that this recommendation be closed since the following measures have been implemented: (a) Use of PRINCE2 elements to manage the related projects; (b) Completion of high-level timeline; (c) Introduction of Executive Checkpoints, for each project; (d) Improved Project resource techniques; (e) Increase the audience of the weekly project status meetings using standard templates and communications sharing.	The Board acknowledges the Administration's response. The Umoja project team has continued to improve project management disciplines, notably by strengthening the Umoja Project Management Office through training and the use of new software to track progress against an integrated project plan within the project. This recommendation is viewed as implemented.	X			

Report reference	*Summary of recommendation*	*Board comments on status April 2016*	*Board comments on status April 2016*	*Fully implemented*	*Under implementation*	*Not implemented*	*Closed by the Board*
A/68/151, para. 105	The Board recommends that the Administration design and implement assurance mechanisms which enable the steering committee to challenge the project on scenarios which may impact on current performance and on future delivery.	The Administration considers this recommendation is implemented as existing governance mechanisms composed of project owner, process owners, the Umoja steering committee, Management Committee and the Secretary-General have been shown to provide adequate assurance for effective implementation of the project. The Board is also aware that the Administration has in the past used independent mechanisms, as appropriate, to assess certain aspects/stages of the project implementation and is willing to continue doing so, as needed.	This recommendation has wider application than to the Umoja project and relates to similar recommendations made about the capital master plan. Unlike most large organizations, the United Nations does not have a system of independent assurance for major projects which would enable senior management to challenge those delivering projects more effectively, and has no appetite to develop such a mechanism for Umoja. In the Board's view obtaining technical assurance and the use of peer review via the Umoja systems integrator may be valuable, but lacks the level of independence and objectivity required. The Administration still needs to consider how it will obtain assurance, independent of the project team, of the successful use of the enterprise resource planning post go-live.				X
A/67/164, para. 31	The Board recommends that the Administration (a) clearly set out how it will manage change and embed more efficient and standardized working practices across the Organization, and (b) develop plans for how staff will be supported to develop the skills, capacity and capability to adopt different working practices.	Implementation of this recommendation is ongoing and involves the efforts of process owners, the Chief Information Technology Officer, the Umoja project, as well as the global service delivery model team.	This recommendation is fundamental to the Administration's ability to more effectively deliver administrative support functions such as finance, human resources, logistics, procurement and others. The recommendation was made in response to parochial and inefficient working practices identified by the Board in its review of United Nations business processes prior to the implementation of Umoja. The adoption of Umoja Integration and the implementation of the other transformation initiatives referred to in the Administration's response presents the opportunity for a fundamental shift in how departments				X

Report reference	Summary of recommendation	Administration comments on status April 2016	Board comments on status April 2016	Fully implemented	Under implementation	Not implemented	Closed by the Board
			manage their end-to-end business processes, of which the new enterprise resource planning system is one important element. If the opportunity is taken, it could reduce the level of resources used on administrative support activities, resources that could be deployed to front-line activities				
			This recommendation has been closed and superseded by a new recommendation in the present report				
A/67/164, para. 32	The Board also recommends that the Administration establish a formal approach to managing and improving business processes to enable continuous reform and improvement following implementation of the enterprise resource planning system	The Administration considers this recommendation to be under implementation, but will review the recommendation in the light of the Board's recent comments and address the issue in the context of planning for the 2017-2019 time frame, which will be presented in the eighth progress report. It could be noted as an example that the Umoja Post-Implementation Review Task Force for Cluster 3 has led to the organization of fruitful workshops on the management of consultants and individual contractors, and on the management of the "UNDP as a service provider" process, leading to improvements in the operations	The recommendation was made in response to concerns relating to the wider management of end-to-end business processes of which the information technology-enabled process steps contained in the enterprise resource planning solution are one part. The United Nations approach to process management requires a significant re-think, and a formal approach to continuous improvement is one element of this. The Board notes the Administration's plans, but also notes that each year the Administration's responses demonstrate a limited understanding of what a formal system of continuous improvement is. The Board views this recommendation as not implemented and continues to caution that a true culture of continuous improvement as part of a wider management system can take years to fully achieve			X	
Total				2	8	5	1
Percentage				13	50	31	6

Annex II

Organizations deploying the enterprise resource planning system (Umoja)

Cluster 1

Peacekeeping missions

United Nations Mission for the Referendum in Western Sahara (MINURSO)

United Nations Stabilization Mission in Haiti (MINUSTAH)[a]

United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO)

Regional Service Centre — Entebbe, Uganda

African Union/United Nations Operation in Darfur (UNAMID)

United Nations Disengagement Observer Force (UNDOF)

United Nations Peacekeeping Force in Cyprus (UNFICYP)

United Nations Global Service Centre — Brindisi, Italy

United Nations Interim Force in Lebanon (UNIFIL)[b]

United Nations Interim Security Force for Abyei (UNISFA)

United Nations Interim Administration Mission in Kosovo (UNMIK)

United Nations Mission in Liberia (UNMIL)

United Nations Mission in South Sudan (UNMISS)

United Nations Operation in Côte d'Ivoire (UNOCI)

Office of the Special Coordinator for Lebanon[b]

United Nations Support Office for the African Union Mission in Somalia

[a] Umoja Integration pilot.
[b] Umoja Foundation pilot.

Cluster 2

Special political missions supported by the Department of Field Support

United Nations Integrated Peacebuilding Office in the Central African Republic (BINUCA)

United Nations Office in Burundi (BNUB)

United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA)

Office for the Joint Special Representative of the United Nations and the League of Arab States for Syria

Office of the Special Envoy of the Secretary-General for the Sahel

Special Envoy of the Secretary-General for the Great Lakes Region

United Nations Assistance Mission in Afghanistan (UNAMA)

United Nations Assistance Mission for Iraq (UNAMI)

United Nations Integrated Peacebuilding Office in Guinea Bissau (UNIOGBIS)

United Nations Military Observer Group in India and Pakistan (UNMOGIP)

Kuwait Joint Support Office

United Nations Regional Office for Central Africa

United Nations Office for West Africa/Cameroon-Nigeria Mixed Commission

United Nations Regional Centre for Preventive Diplomacy for Central Asia

Office of the United Nations Special Coordinator for the Middle East Peace Process

United Nations Support Mission in Libya (UNSMIL)

United Nations Assistance Mission in Somalia (UNSOM)

Accra

United Nations Mission for Ebola Emergency Response (UNMEER)

Cluster 3

Nairobi group

United Nations Environment Programme (UNEP)

United Nations Human Settlements Programme (UN-Habitat)

United Nations Office at Nairobi

Bangkok

Economic and Social Commission for Asia and the Pacific (ESCAP)

Office for the Coordination of Humanitarian Affairs

Phnom Penh

United Nations Assistance to the Khmer Rouge trials

Cluster 4

Field missions[a]

Clusters 1 and 2 and the missions below

Committee on Missing Persons in Cyprus

United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic (MINUSCA)[b]

Office of the Special Adviser on Cyprus

Office of the Special Adviser to the Secretary-General on Yemen[c]

Office of the Special Envoy of the Secretary-General for Syria[d]

Office of the Special Envoy for the Sudan and South Sudan[c]

Somalia and Eritrea Monitoring Group

United Nations Office to the African Union[c]

United Nations Representative to the Geneva International Discussions[c]

Addis Ababa

Economic Commission for Africa (ECA)

Beirut

Economic and Social Commission for Western Asia (ESCWA)

Santiago

Economic Commission for Latin America and the Caribbean (ECLAC)

Geneva group

Economic Commission for Europe (ECE)

International Trade Centre (ITC)

International Criminal Tribunal for the former Yugoslavia

International Residual Mechanism for Criminal Tribunals

Office of the United Nations High Commissioner for Human Rights (OHCHR)

Secretariat of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

United Nations Conference on Trade and Development (UNCTAD)

Secretariat of the United Nations Framework Convention on Climate Change

United Nations Office for Disaster Risk Reduction

United Nations Office at Geneva

New York group

Counter-Terrorism Committee Executive Directorate

International Criminal Tribunal for Rwanda[a]

Department for General Assembly and Conference Management

Department of Economic and Social Affairs

Department of Field Support

Department of Peacekeeping Operations

Department of Management

Department of Political Affairs

Department of Public Information

Department of Safety and Security

Executive Office of the Secretary-General

International Civil Service Commission

Office for Disarmament Affairs

Office of Internal Oversight Services

Office of Legal Affairs

United Nations Joint Staff Pension Fund

Vienna group

United Nations Interregional Crime and Justice Research Institute

United Nations Office on Drugs and Crime

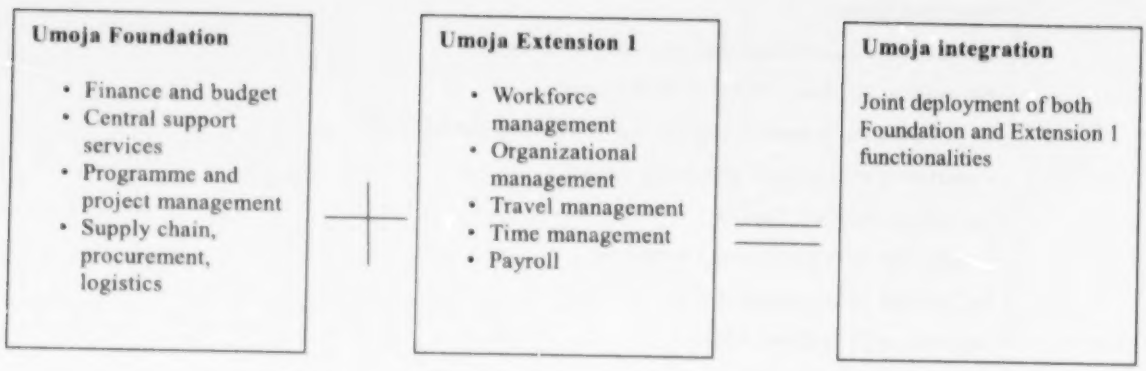
United Nations Office at Vienna

[a] Umoja Extension 1 (international staff).
[b] Previously called the United Nations Integrated Peacebuilding Office in the Central African Republic (BINUCA).
[c] Umoja Integration.
[d] Previously called Office for the Joint Special Representative of the United Nations and the League of Arab States for Syria.

Cluster 5

Peacekeeping and special political missions[a]

[a] Umoja Extension 1 (national staff).


Umoja Foundation
• Finance and budget
• Central support services
• Programme and project management
• Supply chain, procurement, logistics
Umoja Extension 1
• Workforce management
• Organizational management
• Travel management
• Time management
• Payroll
Umoja integration
Joint deployment of both Foundation and Extension 1 functionalities

Annex III

Planned functional scope of the enterprise resource planning system (Umoja)

Foundation	*Description*
Central support services	Services provided to the public and staff • Sales (third-party procurement services and billing customers)
	Facilities management • Real estate administration • Real estate planning
Programme and project management	• Project initiation • Project planning • Project execution • Performance monitoring
Finance and budget	Financial management • Budget implementation • Grants management
	Cost and management accounting • Accounting for specific events and activities — internal orders • Overhead accounting: cost centre accounting
	Financial accounting • Asset accounting • General ledger • Accounts payable • Accounts receivable • Taxes and insurance
	Cash management and treasury • Bank management • Cash and liquidity management • Investment accounting • Treasury and risk management — investments

Foundation	*Description*
Supply chain/ procurement/ logistics	Source to acquire • Requisition to purchase order • Low-value acquisition • Contract management • Supplier collaborations Receipt and inspection • Inbound processing • Outbound processing • Warehouse and storage Equipment maintenance • Equipment assignment and management • Equipment maintenance and operations • Decommission and disposal

Extension 1	*Description*
Workforce management	• Personnel administration (onboarding/contract renewal/movements/separations) • Entitlements • Maintain human resources reference tables • Core master data management • Medical and life insurance enrolment • Life and work events • Claims under Staff Rules, Appendix D, and malicious acts insurance policy • Annual enrolment • Special leave without pay — prepaid insurance and pension
Organizational management	• Manage reorganization • Maintain organization structure • Create position (non-post) • Maintain position • Loan position

Extension 1	*Description*
	• Bulk extension of positions
	• Human resources budget implementation
Travel management	• Official business travel
	• Human resources travel
	• Uniformed personnel travel
	• Shipment of personal effects
	• Travel master data
	• Travel expenses
	• Ticket billing and invoicing solution
Time management	• Leave management
	• Manage work schedules
	• Positive time recording
	• Request for overtime and compensatory time off
	• Evaluate time data
Payroll	• Staff payroll
	• Pension reconciliation
	• United States tax data collection
	• Claims processing — overpayment
	• Arrears processing
	• Off-cycle processing
	• Replacement payments and disbursements
	• Reversals and voids
	• Maintain payroll master data

Source: Umoja project website.